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ABSTRACT

The 1982 progress report on the regents 1980 New York plan for postsecondary education development is presented. Contents include the 1982 progress reports of The State University of New York and The City University of New York, and the consolidated progress report of independent institutions prepared by the Commission on Independent Colleges and Universities. All amendments to institutional master plans since November 1, 1980, are included, along with information on progress made toward the regents four general goals for postsecondary education: excellence, access, diversity, and effective use of resources. The goals and objectives presented in the 1980 statewide plan are reviewed in the context both of responses by the governor and the sectors to the 1980 plan, and of changes in the environment of higher education during the past 2 years. Indicators by which it will be possible to monitor significant levels and trends as a basis for developing policy recommendations are also proposed. Specific topics include: enrollment trends, influences, and projections; student financial aid; fiscal resources; measures of student skills and knowledge; secondary-postsecondary articulation; student retention; academic support services; and participation of adults and minority groups. (SW)

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THE REGENTS 1982 PROGRESS REPORT
ON
THE REGENTS STATEWIDE PLAN
FOR THE
DEVELOPMENT OF POSTSECONDARY EDUCATION
1980

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The University of the State of New York
THE STATE EDUCATION DEPARTMENT
Albany, New York 12230

October 1982

THE BOARD OF REGENTS
THE UNIVERSITY OF THE STATE OF NEW YORK
THE STATE EDUCATION DEPARTMENT

WILLARD A. GENRICH
CHANCELLOR

4287 MAIN STREET
BUFFALO, NEW YORK 14226

October 31, 1982

To the Governor and Legislature of The State of New York:

In compliance with subdivision 6 of Section 237 of Education Law, I am pleased to transmit herewith "The Regents 1982 Progress Report on the Regents Statewide Plan for the Development of Postsecondary Education, 1980." It incorporates the 1982 Progress Reports of the State University of New York and The City University of New York, and the consolidated progress report of independent institutions prepared by the Commission on Independent Colleges and Universities. In compliance with statute, the Progress Report also reports all amendments to institutional master plans since November 1, 1980, and progress made toward the Regents four general goals for postsecondary education as expressed in the 1980 Plan: Excellence, Access, Diversity and Effective Use of Resources.

The Regents 1982 Progress Report is a bridging document in New York State's higher education planning process. Coming halfway between the quadrennial statewide plans, it both takes note of progress made toward the objectives of the 1980 Plan and looks forward to the preparation of the 1984 Plan.

Maintaining the postsecondary system in New York State, one of the State's greatest assets, depends upon the active participation of the Board of Regents, the Governor, the Legislature, the postsecondary institutions and sectors, and the people of the State. Thus the 1982 Progress Report reviews the goals and objectives presented in the 1980 Statewide Plan in the context both of responses by the Governor and the sectors to the 1980 Plan, and of changes in the environment of higher education during the past two years.

The 1980 Plan called on institutions and the State to set and to meet measurable objectives within a timetable. The 1982 Progress Report proposes several critical indicators by which it will be possible to monitor significant levels and trends as a basis for developing policy recommendations. Development and refinement of these indicators is intended to enable the higher education community as a whole to move from the general expression of goals, on which all agree, to the creation of programs and policies, grounded in accurate information, which will be supported by a consensus of all interested parties.

While substantial progress has been made toward achieving many of the objectives proposed in the 1980 Plan, much still remains to be done. The experience of the last two years has tended to confirm the sense, expressed in the 1980 Statewide Plan, that a new cycle is beginning, one which will pose many challenges to postsecondary education in New York State. The decades ahead will demand the energy, imagination, and commitment of all participants in the planning process to respond to emerging problems and concerns and to seize the new opportunities that may await us.

Respectfully submitted,

Willard A. Genrich

Willard A. Genrich
Chancellor

THE REGENTS 1982 PROGRESS REPORT
ON
THE REGENTS STATEWIDE PLAN
FOR THE
DEVELOPMENT OF POSTSECONDARY EDUCATION
1980

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The University of the State of New York
THE STATE EDUCATION DEPARTMENT
Albany, New York 12230

October 1982

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Table of Contents

		Page
Introduction		i
	Overview of Developments Since 1979-80	iii
	Action by the Governor on the 1980 Plan	v
Chapter 1.	Maintaining Access to Postsecondary Education	1
	Historical Measures of Access (p. 1); Recent Enrollments in New York State (p. 3); Factors Contributing to the Enrollment Changes (p. 6); Projection Assumptions (p. 8); 1982 Projections (p. 12).	
Chapter 2.	Maintaining a Diversity of Institutions	19
	Sector Enrollment Shares (p. 19); Net Cost of Attendance (p. 27)	
Chapter 3.	Resources	31
	Student Aid (p. 31); Facilities (p. 40); Fiscal Resources (p. 49); Cost Effectiveness of Institutional Operation (p. 60)	
Chapter 4.	Progress in Other Areas of Concern	62
	Secondary/Postsecondary Articulation (p. 62); Higher Education and Economic Development (p. 63); Inter-institutional Cooperation (p. 68)	
Chapter 5.	Progress Toward Achieving the Remaining Objectives	71
	Quality Improvement Measured by Student Skills and Knowledge (p. 71); Student Retention (p. 74); Relation of Postsecondary Education to More Advanced Levels of Study (p. 76); Improvement of Academic Support Services--Libraries and Computers (p. 86); Adult Access to Postsecondary Education (p. 88); Participation by Members of Minority Groups (p. 95).	
Chapter 6.	Summaries of Sector Progress Reports	103
Appendix A.	Goals and Objectives in the 1980 Plan	112
Appendix B.	Governor's Action on the Regents 1980 Statewide Plan and Response by the Regents and the Commissioner of Education	118
Appendix C.	Master Plan Amendments Approved by the Regents November 1, 1980, October 31, 1982	141
Appendix D.	Format of Student Aid Data Reports	152
Appendix E.	Long Range Goals and Priorities for Occupational Education in New York State with Activities Related to Postsecondary Education	157

Table 16:	Part-Time Enrollment, Level by Sector, 1961-1981	26
Table 17:	Student Aid Available in New York State from Major State and Federal Programs	31
Table 18:	Utilization Rates for TAP Recipients by Level of Enrollment and Type of Institution, 1980-81	35
Table 19:	Utilization Rates for GSL Borrowers by Level of Enrollment and Type of Institution, 1980-81	36
Table 20:	TAP Payments by Sector, 1980-81	38
Table 21:	Guaranteed Student Loan Volume by Sector, 1980-81	39
Table 22:	Total Assignable Square Feet for Selected Room Use	42
Table 22:	Total Net Assignable Square Feet for Selected Room Use Categories by Full-Time Equivalent Day Student Enrollment	43
Table 24:	Share of Revenue from Each Revenue Source of New York State Institutions, 1975 and 1980	51
Table 25:	State Appropriations for Postsecondary Education Operating Purposes	52
Table 26:	Share of New York State Higher Education Appropriations, by Recipient, 1975-76 — 1981-82	53
Table 27:	Shares of New York State Higher Education Appropriations and Student Aid, 1975 and 1980	54
Table 28:	Total Current Funds Expenditures in Higher Education in New York State, 1975-76 — 1979-80	56
Table 29:	Student Related Educational and General Costs per Full-Time Equivalent Students, 1976-77 — 1980-81	57
Table 30:	Research Expenditures by Postsecondary Institutions in New York State, 1975 and 1980	67
Table 31:	Associate Degrees Granted in New York State by Field of Study, 1970-1980	77
Table 32:	Bachelor's Degrees Granted in New York State by Field of Study, 1970-1980	78
Table 33:	Master's Degrees Granted in New York State by Field of Study, 1970-1980	79
Table 34:	Doctoral Degrees Granted in New York State by Field of Study, 1970-1980	80

Table 35:	Physician-Population Ratios in Health System Agency Regions	83-84
Table 36:	Comparisons of Educational Attainment of Adults in New York State and the Nation, Ages 25 and Over, 1940-1981	91
Table 37:	Age Distribution by Level of Study, Full-Time, Part-Time, New York State, Preliminary, Fall 1981	92
Table 38:	Adult Participation in Undergraduate and Graduate Education, Fall 1981	93
Table 39:	Change in Adult Participation Rates, 1978-81	94
Table 40:	Total Degrees Conferred by Racial/Ethnic Cateogry in New York State, 1976-77 and 1978-79	96
Table 41:	Percent of Total Degrees Conferred by Racial/Ethnic Category in New York State, 1976-77 and 1978-79	97
Table 42:	Distribution of One Class Year of Students in New York's Public High Schools by Ethnicity, 1977-80	98
Table 43:	Physician Manpower Survey, 1980-81, Color or Race by Year of Medical School Graduation	102
Table 44:	Minority and Total Enrollment, Medical and Dental Schools in New York State, 1980-81	103

Table of Figures and Tables

		page
Figure 1:	Projection Assumptions for 1982	10-11
Figure 2:	New York State Full-Time Undergraduate Projections	14
Figure 3:	Major Elements of Net Cost of Attendance	28
Figure 4:	Categories of Institutions and Students for which Net Cost of Attendance Will Be Estimated on an Annual Basis	30
Table 1:	Full-Time Undergraduate College Access Indices for New York State	2
Table 2:	Part-Time Undergraduate College Access Indices for New York State	4
Table 3:	Comparison of College Enrollments in New York State in Selected Enrollment/Institution Categories	5
Table 4:	Participation by Age Group	7
Table 5:	Differences between 1981 Actual Enrollment in New York State and Projections Developed in 1980 and Spring 1981	9
Table 6:	Historical and Projected Enrollments, 1981-1997	13
Table 7:	Regents Enrollment Projections for Full-Time Undergraduates, 1982-88	15
Table 8:	Regents Enrollment Projections for Part-Time Undergraduates, 1982-88	16
Table 9:	Regents Enrollment Projections for Graduate Students, 1982-88	17
Table 10:	Regents Enrollment Projections for First-Professional Students, 1982-88	18
Table 11:	Sector Enrollment Shares for Total Enrollment, Level by Sector, 1961-1981	21
Table 12:	Total Enrollment, Level by Sector, 1961-1981	22
Table 13:	Sector Enrollment Shares for Full-Time Enrollment, Level by Sector, 1961-1981	23
Table 14:	Full-Time Enrollment, Level by Sector, 1961-1981	24
Table 15:	Sector Enrollment Shares for Part-Time Enrollment, Level by Sector, 1961-1981	25

INTRODUCTION

The Progress Report is a bridging document in New York State's higher education planning process. Coming halfway between two quadrennial Statewide Plans, it sums up responses to the 1980 Plan (and particularly the Governor's formal response to the Regents Plan), it takes note of progress made toward the achievement of the previous Plan's objectives and other changes in the environment of higher education during the past two years, and it looks forward to the 1984 Plan and what needs to be done in preparation for that Plan.

The 1982 Progress Report springs from the Regents 1980 Statewide Plan and the Governor's response to that Plan which was received in May 1982. That response is appended to this Progress Report. The '82 Progress Report sums up efforts to achieve objectives of the '80 Plan as those efforts are reported in the respective progress reports of the three institutional sectors (the State University of New York, The City University of New York, and the independent sector, for which the progress report is prepared by the Commission on Independent Colleges and Universities). Finally, the '82 Progress Report describes the Regents plans and preparations for the 1984 Statewide Plan. Indeed, this is the heart of the Progress Report as it sets out, for public review and discussion, the Regents perception of the most promising course for achieving the goals of the 1980 Plan. As is customary, the '82 Progress Report makes no new formal policy recommendations but does set forth revised enrollment projections in light of two additional years of enrollment data.

In the 1980 Plan, the Regents proposed four general goals for higher education for the decade of the 1980's and thirteen more specific objectives related to those goals (see Appendix A, Goals and Objectives in the 1980 Plan). The four goals, summarized by the terms "Excellence," "Access," "Diversity," and "Effective Use of Resources," reflect long-standing values and commitments of the Regents and the higher education community of New York State. The more specific objectives were conceived as applications of these goals for the conditions foreseen in the 1980's. The Governor did not approve two of the thirteen objectives and expressed his approval of certain others subject to conditions and understandings. The three major institutional sectors, in their progress reports, shed further light on the objectives and activities to implement them. The '82 Progress Report reviews each of the objectives in the context of these responses and other events of the past two years.

Looking forward to 1984, the critical need of higher education planning in New York is to move from the general expression of goals, on which all agree, to the development of accurate information and measures, supported by a similar consensus. There is, of course, no single summary statistic to measure such complex values as excellence, access, diversity, and the effective use of resources. But this fact does not mean we should abandon all efforts to collect data and design measures that will be indicative of relative success and failure in meeting our goals. Indeed, much data is now collected and many measures are used by different parties. Coordinated statewide planning should aim at achieving a consensus on the most significant data and the measures that have the most promise as indicators of relative success or failure in achieving the goals we hold in common.

The 1982 Progress Report proposes several critical indicators to measure access, the balance among the sectors (a major aspect of diversity), and the effective use of resources. The proposed indicators are in different stages of development. Some are presented here only as concepts, without being applied to any actual data. Other measures are shown with actual data for New York State for recent years. In all cases the intention is to initiate discussion of these measures and to invite comment that will assist in their refinement.

By 1984 the Regents hope to have developed general agreement on the data and the indicators used to evaluate the major goals of higher education in New York. All statistics are subject to interpretation. It is not to be expected that all the major groups involved in higher education planning will agree on the desirable values for any measure or the policies to be pursued as a result of an observed trend in the measures. Nevertheless, it is hoped that common data and common measures will provide a coherent basis for discussion and make it easier to frame a coordinated and effective policy for higher education in New York.

In 1984 the Regents hope to put to use the measures proposed in this Progress Report, as they are refined over the next two years. The '84 Plan will examine the trends indicated by the measures and the trade-offs suggested by contradictory trends, and seek to interpret changes in the measures. On this basis, the '84 Plan will make policy recommendations related to the Regents goals for higher education.

Overview of Developments Since 1979-80

The 1980's and 90's have been predicted to promise many challenges to post-secondary education in New York State, particularly contraction and significant changes in the student body, and the necessity of addressing major fixed costs with limited new resources. The period since the Regents adopted the Statewide Plan for the Development of Postsecondary Education in October 1980 indeed has already been marked by challenge and by the threat of major reductions in Federal support of education. The full impact of these reductions is still unclear. Major changes in student financial assistance programs have also taken place at both Federal and State levels during this period. And, at least partly as a result of economic uncertainty, college enrollments in New York State have exceeded projections, growing rather than declining as the Regents expected, as individuals made the choice to pursue additional education and training rather than compete in a hostile job market. Indeed, the almost 990,000 students enrolled in 1981 were exceeded only by the record enrollment level of 1975, and only slightly. Nevertheless, the Regents still project that the decline in high school graduates will result in a substantial decline in college enrollments, particularly full-time undergraduates, by 1995.

In the past two years, as the national economy has followed a faltering course, both the State and the postsecondary education system have devoted increased attention to higher education's contribution to the stability and growth of the New York State economy. A good deal of this interest has focused on ways to attract and retain high-technology industry. There have also been growing concerns about the ways in which higher education contributes to New York's economy and to the State's supply of professionally and technologically trained manpower. These concerns have been reflected in Regents studies of supply and demand for engineers, dentists, and teachers. Such studies, and the policy recommendations growing from them, are likely to remain a focus of attention. Both the Regents and the Governor have put forth several initiatives aimed at marshalling educational resources to maximize human talent and to provide the kind of high-level training that will best support businesses and industries that depend upon a well-educated work force. Those initiatives have included legislation that would assist research-oriented institutions to acquire up-to-date scientific equipment and to replace present holdings which rapidly become obsolete in today's fast-changing technological society. The Regents are committed to search for new ways by which the rich resources of New York's postsecondary education system can contribute to the State's economic health.

One specific set of issues growing from concern about the State's economy relates to engineering manpower and engineering education. During 1981-82, both State University and the Commission on Independent Colleges and Universities developed proposals related to engineering and technology. A study of the issues was initiated by the Department early in 1982 in response to growing debate within the State over the extent to which the supply of engineers was adequate to meet the needs of New York's economy, and the extent to which New York's engineering and technology schools were contributing to that supply. The study led to findings and recommendations regarding appropriate levels of expansion of capacity in engineering education.

The broader questions related to the State's supply of professionally trained individuals have been addressed by the Department in surveys and analyses of manpower related to physicians and dentists, by the work of the Health Planning Commission, and by initatives proposed by the Governor. The Department's studies will be used to establish a data base for manpower planning in New York for these

essential areas. The Regents also have a continuing concern for the serious underrepresentation of minorities in the licensed professions and the need to remedy that problem.

Student financial aid is essential to the goals of access and diversity. It is equally important to students and to institutions. After much debate, in September 1980 Congress approved the Higher Education Amendments of 1980, which had the broad intention of improving and expanding grant programs (BEOG, renamed Pell Grants, and SEOG), and of seeking to reduce somewhat the cost of loan programs (NDSL and GSL) by adding some cost-saving features. But, during the summer of 1981, Congress enacted the Postsecondary Student Assistance Amendments of 1981, the effect of which is to limit or reduce the expansion which was provided for under the 1980 amendments. A financial needs test and an origination fee were imposed on the Guaranteed Student Loan Program (GSLP). The full impact of changes in the GSLP will not be apparent until 1982-83, as the bulk of borrowers for 1981-82 obtained their loans before October 1, 1981, when limitations on eligibility became effective.

Meanwhile, as a result of 1981 State legislative action, State student aid programs were significantly modified. The Tuition Assistance Program (TAP) was expanded through changes in the award scale for undergraduates which increased the maximum award for first-time undergraduate recipients in 1981-82 to $2,200, made the new maximum applicable for students with higher family net taxable incomes, extended the family income limits for eligibility, and increased the minimum award to $250. Schedules for continuing students were also amended. It is estimated that, when fully implemented, the annual additional cost for this enhancement of TAP will be $57 million.

The Legislature also created a new Supplemental Tuition Assistance Program (STAP) to provide additional aid to undergraduate students who are educationally disadvantaged and carrying a remedial workload. STAP awards are available to students receiving State awards for the first time in 1981-82 or thereafter. Under this program, a student could receive up to two additional semesters of aid payments.

Developments in 1981 and 1982 in student financial aid programs, especially at the Federal level, indicate that uncertain conditions may exist for the next few years. This uncertainty, together with the differences in program, administration, and lack of coordination between Federal and State programs, make it even more essential that, by 1984, the State review major programs (Federal and State) so as to assess goals for its programs, determine how existing programs at governmental and institutional levels operate, and identify ways in which State programs can meet the needs of their constituencies. Ongoing collection and analysis of data about education financing patterns may lead to Regents recommendations for changes in funding mechanisms by 1984, the end of the current planning cycle.

All in all, the experience of the last two years has tended to confirm the sense, expressed in the 1980 Statewide Plan, that a new cycle is beginning. Colleges and universities are reassessing old assumptions, and developing new missions and degree patterns in order to respond to emerging and prospective problems and concerns, including declining enrollment and reduced levels of funding, especially for Federal student aid programs; numbers of students ill-prepared in basic skills; an influx of older students; and the possible incompatibility of available traditional academic training with the demands of the professional and occupational marketplace.

Action by the Governor on the 1980 Plan

On May 5, 1982, Governor Carey took formal action with respect to the 1980 Statewide Plan. The Governor accepted 10 of the 13 objectives to be achieved by postsecondary education by 1990, including two accepted with reservations, one accepted with conditions, and one accepted in principle. He took no action with respect to one objective, and did not accept two objectives. The Governor also commented on topics he believed were not adequately addressed in the 1980 Plan, and made positive proposals for strengthening the master-planning process. As approved by the Governor, The Regents Statewide Plan for the Development of Postsecondary Education, 1980, came into effect on May 5, 1982. The full text of the Governor's action appears as Appendix B to this Progress Report, together with the response of the Regents and the Commissioner of Education to that action.

Chapter 1

MAINTAINING ACCESS TO POSTSECONDARY EDUCATION

Student access continues to be one of the Regents primary goals for higher education. Clear evidence exists of the advantages to both individuals and society of college education, and the Regents believe that all qualified individuals should have the opportunity to obtain a college education.

The primary indicators of access to postsecondary education are college going rates for different types of students. Historical data are provided below for several key indicators that show significant increases in access in recent years. Also provided are enrollment figures, both historical and projected. The historical figures provide insights into changing college enrollment patterns in New York State. The projections indicate the enrollment levels necessary to maintain access at current levels.

Historical Measures of Access

Like other aspects of higher education, access is not a simple one-dimensional concept. For that reason no single statistical measure can be devised to monitor all relevant situations and relationships. A small number of indicators can be identified, however, which describe access in general terms and provide a basis for monitoring the achievements of the State relative to access.

The access indicators for full time undergraduates are shown in Table 1. Three statistics are provided. The first indicator is the ratio of all New York State residents enrolling in college as full-time, first-time freshmen in New York State to New York high school graduates in the previous year. The upward trend in this index from 53 percent in 1972 to 62 percent in 1981 indicates that participation in higher education in New York is increasing. A significant part of the increase can be attributed to larger numbers of older people entering college for the first time.

The second statistic corrects for the older college students by including only full-time, first-time undergraduates under 20 years of age attending college in New York State. This provides a picture of the percentage of recent New York high school graduates who go on to college in-state. This recent high school graduate College Entrance Index shows a modest but significant increase between 1975 and 1981 and a somewhat larger increase between 1979 and 1981. This index is 10-12 percentage points lower than the first one because the first includes all full-time first-time undergraduates regardless of age.

The third indicator is the ratio of the State's residents less than 20 years of age who enroll, as full-time first-time undergraduates in any of the nation's colleges, to New York high school graduates in the previous year. This overall or national College Entrance Index is an estimate of the proportion of recent New York State high school graduates who go on to college anywhere during the fall semester after graduation. This proportion increased slightly between 1975 and 1979. (The 1981 figure will not be available until 1983). This index and the preceding one cannot be calculated for more historical years because age distribution data needed for calculations are not available.

Access for part-time undergraduate students, a group that is generally older than full-time undergraduates, is also of concern to the Regents. This is particularly true given the prospect of increasing numbers of older people in the population and increasing needs for education related to job changes and skill improvement expected in the 1980's. Two general

Table 1.
FULL-TIME UNDERGRADUATE ACCESS INDICES FOR NEW YORK STATE
Selected Years

Full-Time Undergraduate Access Index

Year		New York State HS Graduate College Entrance Index*	New York State Recent HS Graduate College Entrance Index**	National Recent HS Graduate College Entrance Index***
Fall	1968	56.1%	NA	NA
	1969	NA	NA	NA
	1970	NA	NA	NA
	1971	NA	NA	NA
	1972	53.0	NA	NA
	1973	53.9	NA	NA
	1974	56.7	NA	NA
	1975	57.1	47.2%	59.0%
	1976	54.3	NA	NA
	1977	56.4	NA	NA
	1978	57.2	46.9%	NA
	1979	59.9	47.5%	60.2%
	1980	61.5	49.5% (est.)	NA
	1981	62.1%	51.3%	NA

NOTES:

New York State College Entrance Index =

$$\frac{\text{NYS Residents enrolled Full-Time First-Time in fall of Year t}}{\text{NYS High School Graduates in Spring of Year t}}$$

* Overall Index includes all full-time first-time enrollees in New York State colleges regardless of age.

** NYS Recent Graduate Index includes only enrollees in New York State colleges who are less than 20 years of age. It can be calculated only when age distribution of students is available, generally in odd numbered years.

*** National Recent Graduate Index includes only enrollees less than 20 years of age but attending anywhere in the USA. Its calculation requires both age distribution of students and interstate residence and migration statistics. The latter was collected in 1981 by the National Center for Education Statistics; it is not known when they will collect it next.

Source: NYSED, Office of Postsecondary Research, Information Systems and Institutional Aid, 1982

indices are used for part-time students: 1) the ratio of part-time undergraduate enrollment to the total population aged 20-44, and 2) the ratio of part-time enrollment to the population aged 20-44 eligible for undergraduate programs (i.e., having 12 to 15 years of education). These indices, presented in Table 2 for those years for which data are available, more than doubled between 1960 and 1970, and they continued to rise during the seventies, although at a slower rate. The index for the eligible population has risen by 21 percent since 1970, compared to 40 percent for the total population ages 20-44. The difference in these rates of increase reflects the substantial increase between 1970 and 1981 in the proportion of the population in New York State that had 12 to 15 years of education.

It should be noted that the increases suggested by these part-time enrollment indices are slightly overstated. The average age of individuals in the 20 to 44 age group is younger now than it was in 1960 and 1970. Given that the 35-44 age group participates at only one-half of the rate of the 20-34 age group, the population shift toward the younger group that occurred between 1970 and 1981 would have produced an increase of nearly 3 percent in the overall 20-44 age indices, even if no real change in participation had occurred for the individual age groups. Thus real increases in participation are somewhat smaller than shown in Table 2.

Recent Enrollments in New York State

In the two years since the 1980 Plan, college enrollments in New York State have risen slightly. These increases, which were not anticipated in the 1980 enrollment projections, demonstrate that recruiting initiatives and a relatively weak job market were able to delay the beginning of the decline in enrollment projected by the Regents. A close examination of the enrollment shifts shows some changes which deserve attention by planners at the State, sector, and campus levels.

Overall, degree-credit enrollment in New York State reached nearly 990,000 students in 1981, the second highest total in history. This represented nearly 10 percent of the State's population between the ages of 18 and 60. In 1981, full-time graduate enrollments were 3 percent above 1979 levels, with nearly all of the increase occurring in 1980. Part-time graduate enrollment dropped 1 percent, however, partially offsetting the full-time increases. First-professional enrollments continued to rise, with increases of 5 and 20 percent for full and part-time enrollments, respectively.

Table 3 provides more detailed statistics for 1979, 1980, and 1981. The greatest increases in enrollment occurred for full-time undergraduates at State University community colleges (up 11 percent), part-time undergraduates in City University senior colleges (up 33 percent), and undergraduate enrollment in proprietary institutions (up 20 percent). Declines were experienced in full-time undergraduate enrollment at the City University (down 9 percent), as well as in part-time undergraduate enrollment at State University four-year units (down 12 percent) and graduate programs (down 9 percent). In general, enrollment changes were larger between 1979 and 1980 than between 1980 and 1981. The general pattern in New York is similar to that for the nation as a whole, with community colleges continuing to show enrollment increases and other types of colleges holding steady or showing smaller increases.

In terms of total enrollment, the State University and the Independent sector were up 6.5 and 4.9 percent, respectively, between 1979 and 1981. The State University increases were primarily in the community colleges, while the Independent sector increases were primarily in four-year institutions. Significant increases also continued in the Proprietary sector, at least for full-time enrollments. A 2 percent drop was experienced overall at the City University, as a 5.8 percent decrease for full-time enrollment was not fully offset by a

Table 2
PART-TIME UNDERGRADUATE COLLEGE ACCESS INDICES FOR NYS POPULATION AGES 20-44

Year	Rate For Eligible Population* Ages 20-44	Rate For Total Population Ages 20-44
1960	2.22%	1.04%
.	.	.
.	.	.
.	.	.
.	.	.
.	.	.
1970	5.34	2.91
1971	NA	2.98
1972	NA	3.29
1973	6.61	3.66
1974	7.09	3.87
1975	NA	4.18
1976	NA	3.70
1977	NA	3.63
1978	6.18	3.67
1979	5.94	3.72
1980	NA	3.85
1981	6.46	4.07

* Population having 12 to 15 years of education.

Source: NYSED, Office of Postsecondary Research, Information Systems and Institutional Aid, 1982

Table 3
COMPARISON OF COLLEGE ENROLLMENTS IN NEW YORK STATE
IN SELECTED ENROLLMENT/INSTITUTION CATEGORIES
1979, 1980, and 1981

Institution/Enrollment Category	Actual New York State Enrollment			Percentage Change	
	1979	1980	1981**	1979-80	1979-81
New York State					
Full-time Undergraduate	548,648	560,155	568,581	2.1	3.6
Part-time Undergraduate	234,637	244,251	251,954	4.1	7.4
Full-time Graduate	45,587	46,912	46,908	2.4	2.9
Part-time Graduate	99,829	98,363	97,812	-1.5	-2.0
Full-time First-Professional	21,036	21,463	22,219	2.0	5.6
Part-time First-Professional	2,086	2,344	2,519	12.4	20.8
Full-time Undergraduate					
State University					
4-Year	107,679	111,782	112,769	3.8	4.7
Agricultural & Technical	20,680	20,702	20,390	0.1	-1.4
Community Colleges*	83,223	89,625	92,702	7.7	11.4
City University					
Senior	76,878	72,418	70,520	-5.8	-8.3
Community Colleges	34,649	30,748	30,924	-11.3	-10.8
Independent					
4-Year	200,714	207,771	212,140	3.6	6.1
2-Year	8,800	9,870	9,823	9.5	1.9
Proprietary	16,025	17,239	19,313	7.6	20.5
Part-time Undergraduate					
State University					
4-Year	21,302	23,877	24,318	12.1	14.2
Agricultural & Technical	8,074	8,574	8,254	6.2	2.2
Community Colleges*	82,285	84,067	88,889	2.2	8.0
City University					
Senior	35,875	36,612	37,637	2.0	4.9
Community Colleges	13,300	16,437	17,407	23.6	30.9
Independent					
4-Year	63,641	65,012	66,067	2.1	4.1
2-Year	3,596	3,559	3,494	-1.0	-7.3
Proprietary	6,564	6,113	5,888	-6.9	-10.3
Full-time Graduate and First-Professional					
State University	14,946	15,443	15,528	3.3	3.9
City University	4,657	4,522	4,743	-2.9	1.8
Independent	47,020	48,410	48,856	3.0	3.9
Part-time Graduate and First-Professional					
State University	18,519	18,345	16,891	-0.9	-8.9
City University	11,513	11,536	11,999	0.2	4.2
Independent	71,883	70,826	71,441	-1.5	-0.6
All Enrollment					
State University	356,708	372,415	379,741	4.4	6.5
City University	176,872	172,273	173,230	-2.6	-2.1
Independent	395,654	405,448	411,821	2.4	4.1
Proprietary	22,589	23,352	25,201	3.9	11.6
TOTAL	951,823	973,448	989,993	2.3	4.0

* Includes Fashion Institute
** Preliminary

Source: NYSED, Office of Postsecondary Research, Information Systems and Institutional Aid, 1982

small increase for part-time enrollment. However, nearly all declines at CUNY occurred between 1979 and 1980. Except for full-time undergraduates at the senior colleges, enrollments rose at the City University between 1980 and 1981.

Factors Contributing to the Enrollment Changes

The demographic and institutional factors which produced the enrollment changes noted above are summarized in Table 4. Changes are shown for the three major factors which interact to produce college enrollments: entry participation rates, retention rates, and market shares. Both participation and retention were generally up statewide in 1981 and appear to be equally important in producing the statewide enrollment increases. The reasons for the increases in participation and retention are more difficult to determine. Social changes, such as a generally more educated populace and changing attitudes of women about college and careers, are consistent with the observed increase. Economic conditions, including fewer jobs and higher unemployment, especially among younger age groups, also appear to have encouraged greater college participation. A third influence that should not be overlooked is increased institutional recruitment, and particularly an increase in extension offerings. Off-campus locations may have played a significant role in enrollment increases at a number of colleges in recent years.

Participation rates appear to have risen for entering undergraduates in each age group between 1978 and 1981. The participation rates for full-time, first-time and for part-time, first-time students less than age 20 increased by 9.4 and 10.3 percent, respectively. An even greater increase of 23.1 percent occurred for 30-44 year olds attending as full-time, first-time students. Changes between 1979 and 1980 were generally similar to changes between 1980 and 1981. Increases in part-time undergraduate participation were generally small for ages 20-34, but rose as much as 23 percent for adults over 35. Graduate school participation rates declined slightly overall, with declines up to 15 percent for younger age groups and increases up to 14 percent for older age groups.

Changes in transition ratios since 1978 indicate some significant changes in retention. In general, the City University appears to have experienced declining retention, particularly at upper division levels, until 1981 when retention improved substantially. Quite large increases in the transition ratios occurred for all sectors in 1981. In four-year institutions, increases in transition ratios have been significantly greater for upper-division students than for lower-division students. Among two-year institutions, the sophomore transition ratio rose from 5 percent at City University to over 30 percent in the Proprietary sector. This suggests that institutions may be adjusting their programs or their standards or both in order to retain more students. It may also be that the poor job market is inducing more students to remain in college than in earlier years.

The third factor, market share, showed changes between 1978 and 1981 that followed quite closely the changes observed in the transition ratios. However, a few unique changes by type of institution are worthy of comment. For full-time undergraduates, all institutional types within the State University show market share gains except the agricultural-technical colleges, statutory colleges, and specialized colleges. (The specialized colleges had a compensating increase in their share of full-time graduate enrollments.) Only the State University colleges and health sciences centers showed losses in share of graduate enrollments. The City University experienced significant losses in enrollment shares throughout its system, for both undergraduate and, to a lesser extent, graduate enrollment. These changes reflect both changes in the composition of the available pool of potential students in New York City and changing rates of participation for each subgroup.

NEW YORK STATE

Table 4 : PARTICIPATION BY AGE GROUP

UNDERGRADUATE

AGE GROUP	Full-Time, First-Time 1978	1979	1980*	1981	% Change 1978-81	Part-Time 1978	1979	1980*	1981	% Change 1978-81
HSG or 15-19	46.9%	47.5%	49.5%	51.3%	+9.4	1.36%	1.47%	1.48%	1.50	10.3
20-24	.93	1.11	1.04	.01	+8.6	3.88	3.95	3.96	4.06	4.8
25-29	.31	.28	.30	0.33	+6.5	2.94	3.00	3.05	3.10	5.5
30-34	.13	.13	.15	0.16	+23.1	2.63	2.70	2.66	2.62	-0.5
35-44						1.67	1.71	1.84	1.93	15.4
45-59						.70	.70	.78	.86	23.1

GRADUATE

	Full-Time 1978	1979	1980*	1981	% Change 1978-81	Part-Time 1978	1979	1980*	1981	% Change 1978-81
15-19	--	.01	.02	.03	--	.01	--	--	--	--
20-24	.60	.61	.60	.59	-2.4	.95	.92	.86	.83	-12.3
25-29	.69	.67	.64	.59	-15.2	2.01	1.84	1.77	1.72	-14.6
30-34	.34	.34	.34	0.33	-2.9	1.39	1.41	1.37	1.39	-3.5
35-44	.14	.14	.16	0.16	+14.3	.73	.78	.81	.83	14.2
45-59	.04	.04	.04	0.04	0.	.25	.27	.28	.28	12.0

PERCENT CHANGE IN TRANSITION RATIOS (A PROXY FOR RETENTION)
FROM 1978 LEVELS

	FOUR-YEAR INSTITUTIONS Sophomore Ratio 1979	1980	1981	Upper Division Ratio 1979	1980	1981	TWO-YEAR INSTITUTIONS Sophomore Ratio 1979	1980	1981
State University	-1.3%	0.7%	2.5%	-0.4%	1.1%	18.9	4.3%	12.6%	11.4%
City University	1.5	-0.3	0.9	-2.2	-10.3	16.8	8.7	-2.9	5.2
Independent	-0.4	1.5	1.1	2.8	5.5	16.8	4.4	24.6	20.1
Proprietary	5.9	9.7	-7.3	23.4	18.9	61.0	12.0	18.4	30.8

-7-

	Undergraduate					Graduate and First-Professional				
	1978	1979	1980	1981	% Change 1978-81	1978	1979	1980	1981	% Change 1978-81
State University of New York										
University Centers	7.06%	7.02%	7.23%	7.19	+1.8%	11.21%	11.48%	11.91%	11.90	+6.2
University Colleges	10.68	10.63	10.77	10.69	+0.1	1.90	1.87	1.79	1.17	-38.4
Health Sciences Centers	0.39	0.37	0.40	.39	0.0	5.46	5.50	5.39	5.38	-1.5
Specialized Colleges	0.63	0.61	0.57	.61	-3.2	0.74	0.82	0.82	0.85	+14.9
Statutory Colleges	0.99	0.99	0.98	.95	-4.0	2.59	2.76	2.65	2.61	+0.8
Agricultural-Technical	3.78	3.77	3.70	3.59	-5.0	--	--	--	--	--
Community Colleges	15.00	15.17	16.00	16.30	+8.7	--	--	--	--	--
Sector Share	38.55	38.56	39.64	39.72	+3.0	21.91	22.43	22.56	22.46	+2.5
The City University of New York										
Graduate Center	--	--	--	--	--	3.69	3.86	+3.47	3.76	+1.9
Senior Colleges	14.60	14.01	12.93	12.40	-15.1	3.24	3.13	3.16	3.10	-4.6
Community Colleges	6.37	6.32	5.49	5.44	-13.8	--	--	--	--	--
Sector Share	20.98	20.33	18.42	17.84	-15.0	6.93	6.99	6.63	6.86	-1.9
Independent Institutions										
Multiversities	6.69	6.83	6.90	7.00	+4.6	34.55	34.91	34.43	34.72	-0.5
Universities	6.70	6.89	6.98	7.01	+4.6	13.01	13.08	12.90	12.33	-5.2
College Complexes	10.26	10.36	10.39	10.28	+0.2	+4.25	3.35	3.76	4.08	-4.0
Colleges	6.56	6.92	7.10	7.19	+9.6	0.35	0.29	0.50	0.74	+211.4
Specialized Colleges	0.63	0.60	0.64	.67	+6.3	7.41	7.07	6.83	6.44	-13.1
Engineering-Technical	4.83	4.81	4.94	4.99	+3.3	3.77	4.19	4.65	4.63	+22.8
Seminaries	0.08	0.07	0.07	.06	-25.0	2.32	2.09	2.16	2.09	-9.9
Health Science Centers	0.32	0.11	0.10	.10	-68.8	5.51	5.59	5.58	5.64	+2.4
Nursing Schools	0.14	0.13	0.11	.11	-21.4	--	--	--	--	--
2-Year Schools	1.46	1.47	1.63	1.61	+10.3	--	--	--	--	--
Sector Share	37.67	38.19	38.87	39.02	3.6	71.17	70.58	70.81	70.68	-0.7
Proprietary Institutions	2.81	2.92	3.07	3.40	+9.3	+21.0	--	--	--	--
New York State	100.00	100.00	100.0	100.00	100.00	100.0	100.00	100.00	100.00	100.00

*Enrollment distributions by age for 1979 were used to estimate the age breakdown of 1980 enrollments

NYSED: Postsecondary Information Systems/HEDS (June 1982)

At the undergraduate level, the Independent sector has experienced increases in enrollment share for all types of institutions except seminaries, health sciences centers, and nursing schools. At the graduate level, this result is reversed, with only colleges, engineering-technical schools, and health sciences centers showing share increases. Relatively more graduate students appeared to be choosing to attend the State University system over the other sectors than had previously been the case. The Proprietary sector experienced the largest share increase over this period (9.3 percent). This probably is due to current student interest in technical programs and to rises in participation in programs closely related to employment opportunities.

Projection Assumptions

One of the important aspects of the development of enrollment projections in New York State is careful assessment of the accuracy of previous projections. Since the projections are based on extrapolations of historical participation, distribution, and retention of students, there will always be "errors" if future and historical patterns are different. Such differences, of course, do occur because the higher education system is a dynamic one in which institutions, students, and the environment are continually changing. By carefully reviewing the differences between the projections and actual enrollments, it is possible to identify important changes in student participation and choice and also the related segments of the model that require adjustment.

Table 5 provides actual 1981 enrollments along with projections for 1981 included in the 1980 Statewide Plan and revised projections done in spring of 1981. The differences between the actual and projected enrollment show room for improvement, although forecasts for each type of enrollment and institution were reasonably close and many shifts were anticipated. The fact that the two-year errors are double the one-year errors is expected in light of the increasing participation and retention rates in 1980 and 1981.

The assumptions specified in the 1980 Plan still appear to be generally appropriate for the long-range forecasts. However, the one year projection errors are clearly larger than desirable. Based on the fact that the short-term projections have been low for three consecutive years and that selected types of institutions (e.g., community colleges) have been particularly low, three modifications to the projection methodology and assumptions have been implemented to produce the 1982 projections provided below. First, the one-year projections (i.e., for 1982) are based on participation rates and enrollment shares for the previous year, while three year and longer range projections still use weighted average rates of the past three years. Short term variations in participation such as those related to changes in unemployment conditions will be better accommodated by this approach. Second, drawing power classification criteria have been modified to better reflect excess applicant pools (see Figure 1, below). And third, out-of-state enrollments are projected based on population trends projected in each of eleven regions of the nation rather than on trends projected in New York State population.

The major assumptions used in the projections are listed in Figure 1. These adjustments are expected to result in improved accuracy of the short-term projections while retaining the same basic structure and reliability for the long-term projections. It is important to keep in mind that the projections assume recent conditions will be maintained in all of the factors that influence enrollments, from population trends to the economy to social attitudes to revenue availability to institutional initiatives and competition.

Table 5. DIFFERENCES BETWEEN 1981 ACTUAL ENROLLMENT IN NEW YORK STATE AND PROJECTIONS DEVELOPED IN 1980 AND SPRING 1981

Institution/ Enrollment Category	Actual 1981 New York State Enrollment**	Regents 1980 Plan 1981 Projections	% Difference 1980 Plan Projections & 1981 Actual	Spring 1981 Projections For 1981	% Difference 1981 Projections & 1981 Actual
New York State					
Full-Time Undergraduate	568,581	539,350	-5.1%	559,863	-1.5%
Part-Time Undergraduate	251,954	228,850	-9.2	239,302	-5.0
Full-Time Graduate	46,908	44,800	-4.5	46,142	-1.6
Part-Time Graduate	97,812	99,150	1.4	97,921	0.1
Full-Time First-Professional	22,219	21,248	-4.4	21,567	-2.9
Part-Time First-Professional	2,519	2,095	-16.8	2,376	-5.7
Full-Time Undergraduate					
State University					
4-Year	112,769	108,800	-3.5	112,954	0.2
Agricultural & Technical	20,390	19,300	-5.3	20,723	1.6
Community Colleges	92,702	76,700	-17.3	85,357	-7.9
City University					
Senior	70,520	72,430	2.7	73,802	4.7
Community College	30,924	37,720	22.0	30,926	0.0
Independent					
4-Year	212,781	199,050	-6.5	208,979	-1.8
2-Year	9,182	8,100	-11.8	9,504	3.5
Proprietary	19,313	17,250	-10.7	17,618	-8.8

Part-Time Undergraduate					
State University					
4-Year	24,318	19,950	-18.0	22,342	-8.1
Agricultural & Technical*	8,254			8,807	6.7
Community Colleges	88,889	88,400	-0.6	84,180	-5.3
City University					
4-Year	37,637	35,470	-5.8	35,701	-5.1
2-Year	17,407	13,780	-20.8	14,632	-15.9
Independent					
4-Year	66,226	62,600	-5.5	63,752	-3.7
2-Year	3,335	2,350	-29.5	3,358	0.7
Proprietary	5,888	6,300	7.0	6,530	10.9
Full-Time Graduate and First-Professional					
State University	15,528	15,008	-3.3	15,256	-1.8
City University	4,743	4,470	-5.8	4,401	-7.2
Independent	48,856	46,570	-4.7	48,052	-1.6
Part-Time Graduate and First-Professional					
State University	16,891	19,900	17.8	18,851	11.6
City University	11,999	10,750	-10.4	11,094	-7.5
Independent	71,441	70,595	-11.8	70,352	-1.5
All Enrollment					
State University	379,741	348,058	-8.3	368,470	-3.0
City University	173,230	174,620	0.8	170,556	-1.5
Independent	411,821	389,285	-5.5	403,997	-1.9
Proprietary	25,201	23,550	-6.6	24,148	-4.2
TOTAL	989,993	935,493	-5.5%	967,171	-2.3%

-9A-

* Figures are combined in 1980 Statewide Plan
** Preliminary

Source: NYSED: Office of Postsecondary Research, Information Systems and Institutional Aid, 1982

Figure 1

PROJECTION ASSUMPTIONS FOR 1982
UNDERGRADUATE & GRADUATE ENROLLMENT

FACTOR	ASSUMPTION
	Explicit
Population	1978 projections adjusted for 1980 Census data. In & Out-migration rates are assumed to decline to ½ of projected levels by 1995.
High School Graduates	1981 projections based on recent grade progression ratios. No adjustments were made related to expected shifts in race/ethnic composition.
Participation Patterns	1981 rates used for 1982 projections. Mean of 1981 & 1982 rates used for all years past 1983. For full-time, first-time enrollments, a 1.5 percentage point drop in the mean regional rates by 1994 was assumed to reflect the changing race/ethnic composition of secondary enrollments and high school graduates.
Distribution Patterns	1981 shares used for 1982. Shares based on the weighted mean (weights = 1,1,3) of residence and migration data for 1977, 1979 and 1981 used for all years past 1983. For full-time undergraduates, 3 institutional drawing power classes were used based on the weighted mean of 1979-81 data 1) Acceptance ratio 45% 2) Acceptance ratio 45-65% & proprietary institutions 3) All other institutions If a pool of students declines by less than 3% in any year, class 1&2 institutions maintain their enrollment level. If a pool declines by more than 3%, class 1 institutions decline by .33 the rate of the pool decline & class 2 institutions decline by .67 the rate of the pool decline. Class 3 institutions receive their historical share of the remaining pool.
Transfers in Year K	Projected to follow the same curve as lower division enrollments in year K-1.
Sophomore Transition	1981 rates used for 1982 projections. Weighted mean (weights=1,1,2,3,5,10) for years 1976-1981 used for all years past 1983.
Upper Division Transition	1981 rates used for 1982 projections. Weighted mean (Weights-1,1,2,4) for years 1978-1981 used for all years past 1983.

Figure 1 Continued

Implicit

Governmental Initiatives	No substantial changes assumed in: a) Student Aid b) Institutional Appropriations c) Institutional Capacity or Distribution d) Regulatory Constraints
Institutional Initiatives	No substantial changes assumed in: a) Retention Programs b) Program Offerings c) Student Recruitment/Advertising d) Student Aid e) Cost of Attendance
Societal Conditions	No substantial changes assumed in: a) job markets/return on a college education b) family ability to pay c) desire for education d) educational attainment of parents e) rate of personal/social conflict f) academic preparation and ability g) rate of demand for military personnel h) etc.

1982 Projections

As in previous planning cycles, revised enrollment projections have been prepared for this Progress Report. These projections are based on the latest available historical data on enrollments, age distribution of students, student residence and migration, student transfers, participation of out-of-state students, and population and high school graduate projections. These, in conjunction with the modified assumptions described in Figure 1, lead to the projections shown in Table 6. These are projections based on recent patterns of participation and enrollment. They are not predictions. They reflect expected declines in population levels by age group and related changes in college admissions strategies. They provide a baseline against which changes which actually occur can be compared and evaluated.

The basic trends in the projections shown for each of the five types of enrollment in Table 6 are similar to those in previous planning documents. The major difference is that the enrollment decline that has been projected for full-time undergraduates has been delayed two or three years, due primarily to initiatives by the institutions and a poor job market. The difference between the projections for 1980 and 1982, as shown in Figure 2, reflect the significant increases in participation and retention rates experienced in 1980 and 1981.

The lower curve in Figure 2 is the projection presented in the 1980 Statewide Plan. The upper curve is the 1982 projection which incorporates the new data and is approximately 52,000 students higher in 1984, 45,000 in 1988 and 28,000 in 1995. The sharp decline presented in both curves is, of course, due to substantial declines expected in the size of the traditional college age population. These declines began several years ago and the decline in the number of high school graduates in the State has now reached approximately 5,000 per year. This decline is expected to accelerate in the next few years. Increases in college participation rates would have to be very large to offset these declines in the pools of eligible students.

The detailed projections are shown in Tables 7, 8, 9, and 10. The differences between these projections and those in the 1980 Statewide Plan for different types of students closely reflect changes observed between 1979 and 1981 enrollments both statewide and by type of institution. Thus, the largest increases are for full-time undergraduates in SUNY community colleges, part-time undergraduates in SUNY 4-year institutions, etc. Overall, total headcount projections are higher than the 1980 projections by 71,000 students or 7.8 percent, in 1984, and by 73,000, or 8.6 percent, in 1988. In 1984, the SUNY, CUNY, and Proprietary sectors' total headcount projections are down 4.3, 2.2, and 1.0 percent over 1981 levels, respectively while the Independent sector is up 0.3 percent. In terms of full-time equivalent enrollment declines, the results are mixed by region and type of institution. The projections still indicate a decline of nearly 20 percent in full-time equivalent enrollments by 1992 (from 762,000 in 1981 to 619,000).

Table 6

NEW YORK STATE
HISTORICAL AND PROJECTED ENROLLMENTS
1981-1997

	Full-Time Undergraduate	Part-Time Undergraduate	Full-Time Graduate	Part-Time Graduate	Total First-Professional
Historical					
1970	439,726	168,656	40,799	99,081	16,128
1971	467,144	174,640	42,656	105,455	16,863
1972	473,199	195,417	42,770	112,937	17,430
1973	491,621	219,385	43,823	118,668	17,685
1974	514,587	234,802	45,079	124,203	18,331
1975	549,374	256,086	46,675	123,608	18,835
1976	538,147	228,131	45,568	105,687	20,150
1977	542,690	225,340	45,613	101,600	21,618
1978	538,343	229,423	45,625	99,137	22,792
1979	548,648	234,637	45,587	99,829	23,122
1980	560,155	244,251	46,912	98,363	23,807
1981 (Prel.)	568,581	251,954	46,908	97,812	24,738
Projected					
1982	575,150	252,700	47,000	98,500	24,750
1983	567,350	251,700	47,400	99,200	24,750
1984	548,750	250,750	47,800	99,950	24,750
1985	529,150	251,500	47,950	100,500	24,750
1986	509,350	250,600	47,800	100,850	24,750
1987	497,300	249,750	47,700	101,200	24,750
1988	492,600	248,850	47,550	101,550	24,750
1989	484,450	248,000	47,450	101,900	24,750
1990	464,000	247,100	47,350	102,250	24,750
1991	441,350	245,100	46,800	101,600	24,750
1992	426,550	243,050	46,200	101,000	24,750
1993	418,500	241,000	45,650	100,350	24,750
1994	413,150	239,000	45,100	99,700	24,750
1995	412,000	236,950	44,550	99,100	24,750
1996	409,900	235,850	44,150	98,100	24,750
1997	407,250	234,750	43,750	97,150	24,750
1998	407,750	233,700	43,350	96,150	24,750

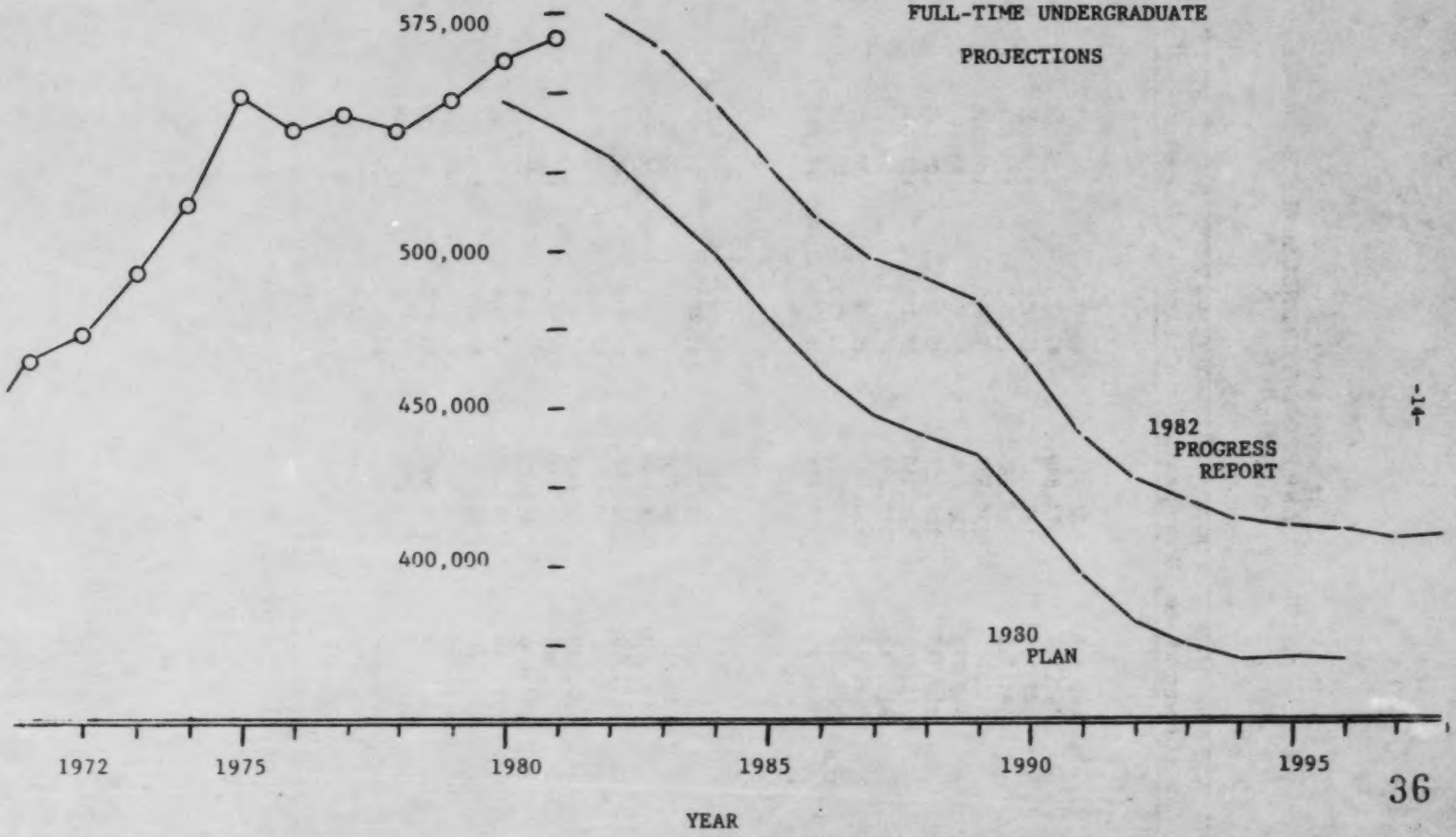
Source: NYSED, Office of Postsecondary Research, Information Systems and Institutional Aid, 1982.

Figure 2

NEW YORK STATE

FULL-TIME UNDERGRADUATE

PROJECTIONS



Source: NYSED, Office of Postsecondary Research, Information Systems and Institutional Aid, 1982.

Table 7

NEW YORK STATE

Regents Enrollment Projections for Full-Time Undergraduates
1982-88

	Fall 1980	Fall 1981 (Prelim)	Fall 1982	Fall 1983	Fall 1984		Fall 1988	
					Low	High	Low	High
State University								
Four-Year[1]	111,782	112,869	111,850	110,000	104,550	108,800	93,300	100,000
Agric. & Tech.	20,702	20,390	20,050	19,500	18,100	18,850	16,000	17,150
Community Colleges	89,625	92,702	92,750	87,900	80,200	83,500	69,350	74,350
Total	222,109	225,861	224,650	217,400	202,850	211,150	178,650	191,500
City University								
Senior Colleges	72,418	70,520	70,200	69,900	68,750	71,550	66,000	70,750
Community Colleges	30,748	30,924	31,400	31,850	30,000	31,250	25,400	27,200
Total	103,166	101,444	101,600	101,750	98,750	102,800	91,400	97,950
Independent								
Four-Year	208,015	212,140	219,050	218,850	208,350	216,900	180,000	192,950
Two-Year	9,626	9,823	9,650	9,450	8,800	9,150	7,550	8,100
Total	217,641	221,963	228,700	228,300	217,150	226,050	187,550	201,050
Proprietary								
Total	17,239	19,313	20,200	19,900	18,950	19,750	17,900	19,200
GRAND TOTAL	560,155	568,581	575,150	567,350	537,700	559,750	475,500	509,700

[1] Fashion Institute of Technology is included in the community college total but not the four-year total.

Source: NYSED, Office of Postsecondary Research, Information Systems, and Institutional Aid, 1982.

Table 8

NEW YORK STATE

Regents Enrollment Projections for Part-Time Undergraduates
1982-88

	Fall 1980	Fall 1981 (Prelim)	Fall 1982	Fall 1983	Fall 1984		Fall 1988	
					Low	High	Low	High
State University								
Four-Year[1]	23,877	24,318	24,550	24,450	23,800	24,800	23,400	25,100
Two-Year (Incl. Community Colleges & Ag. & Tech. Coll.)	92,641	97,143	98,100	98,300	96,500	100,400	95,600	102,500
Total	116,518	121,461	122,650	122,750	120,300	125,200	119,000	127,600
City University								
Senior Colleges	36,612	37,637	37,400	37,150	36,100	37,600	34,550	36,700
Community Colleges	16,437	17,407	17,300	16,650	15,750	16,350	15,000	15,950
Total	53,049	55,044	54,700	53,800	51,850	53,950	49,550	52,650
Independent								
Four-Year	65,714	66,067	66,100	66,050	64,800	67,400	63,300	67,900
Two-Year	2,857	3,494	3,500	3,450	3,400	3,500	3,300	3,500
Total	68,571	69,561	69,600	69,500	68,200	70,900	66,600	71,400
Proprietary								
Total	6,113	5,888	5,750	5,650	5,450	5,650	5,250	5,650
GRAND TOTAL	244,251	251,954	252,700	251,700	245,800	255,700	240,400	257,300

[1]Fashion Institute of Technology is included in the community college total but not the four-year total.

Source: NYSED, Office of Postsecondary Research, Information Systems, and Institutional Aid, 1982.

Table 9

NEW YORK STATE

Regents Enrollment Projections For Graduate Students

1982-88

	Fall 1980	Fall 1981 (Prelim)	Fall 1982	Fall 1983	Fall 1984		Fall 1988	
					Low	High	Low	High
Full-Time								
State University	11,261	11,293	11,400	11,550	11,400	11,900	11,250	12,100
City University	4,522	4,743	4,700	4,650	4,500	4,700	4,350	4,650
Independent	31,129	30,872	30,900	31,200	30,900	32,200	30,300	32,500
Total	46,912	46,908	47,000	47,400	46,800	48,800	45,900	49,250
Part-Time								
State University	18,337	16,882	17,150	17,750	18,950	18,750	18,400	19,700
City University	11,536	11,999	12,000	11,800	11,350	11,850	11,050	11,850
Independent	68,490	68,931	69,350	69,650	68,550	71,350	68,550	73,500
Total	98,363	97,812	98,500	99,200	97,950	101,950	98,000	105,050
GRAND TOTAL	145,275	144,720	145,500	146,600	144,750	150,750	143,900	154,300

Source: NYSED, Office of Postsecondary Research, Information Systems, and Institutional Aid, 1982.

Table 10

NEW YORK STATE

Regents Enrollment Projections For First-Professional Students

1982-88

	Fall 1980	Fall 1981 (Prelim)	Fall 1982	Fall 1983	Fall 1984		Fall 1988	
					Low	High	Low	High
Full-Time								
State University	4,182	4,235	4,250	4,250	4,150	4,350	4,100	4,400
City University	--	--	--	170	250	290	430	470
Independent	17,281	17,984	18,000	18,000	17,650	18,350	17,350	18,650
Total	21,463	22,219	22,250	22,420	22,050	22,990	21,880	23,520
Part-Time								
State University	8	9	--	--	--	--	--	--
City University	--	--	--	--	-	--	--	--
Independent	2,336	2,510	2,500	2,500	2,450	2,550	2,400	2,600
Total	2,344	2,519	2,500	2,500	2,450	2,550	2,400	2,600
GRAND TOTAL	23,807	24,738	24,750	24,750	24,250	25,250	23,850	25,650

Source: NYSED, Office of Postsecondary Research, Information Systems, and Institutional Aid, 1982.

Chapter 2

MAINTAINING A DIVERSITY OF INSTITUTIONS

Sector Enrollment Shares

The concept of sector balance cannot be described or defined using a single index or statistical measure. Enrollment shares, however, are certainly among the most important indicators of balance. A significant change in the enrollment share of an institution or group of institutions is a clear indication that something significant is happening, or not happening, with respect to student choice and, perhaps, to diversity of opportunities, that deserves closer attention.

Tables 11-16 display the historical enrollment shares of the four institutional sectors in New York State. The tables show three different categories of enrollment (total enrollment, full-time enrollment, and part-time enrollment) for selected years between 1961 and 1981. Enrollment shares are also displayed by level of enrollment and institution: undergraduates at two-year institutions, undergraduates at four-year institutions, graduate students, and first-professional students.

In 1961, almost two out of three students in New York were enrolled at independent institutions. That statement gives the broadest view of enrollment shares in 1961, as related to the aggregate of 337,743 full-time and part-time students in New York's 192 public and independent institutions at the two-year and four-year undergraduate levels, the graduate level, and the first-professional degree level. That broad picture masks significant differences in enrollment shares at different levels, however. For example, 90 percent of all first-professional degree students, and over 80 percent of all graduate students, but only 10.7 percent of two-year students, were at independent institutions in 1961. Among four-year undergraduates, two-thirds were in the independent sector.

Over the next 14 years, marked shifts occurred in sector enrollment shares. At the same time total enrollments burgeoned, reaching an all-time high of 994,578 (headcount) students in 1975, attending 242 public, independent, and proprietary institutions. The virtual trebling of enrollments between 1961 and 1975 meant that all sectors were growing in enrollment, despite changes in enrollment shares. By 1975, however, the balance had reversed at the most aggregate level; almost two out of three students were in public institutions. Again, the aggregate picture masks differences among levels. Almost half of four-year undergraduate students were at independent institutions in 1975, but only 4 percent of two-year students. Over 80 percent of all first-professional degree students, and 62 percent of all graduate students, were in the independent sector.

Nineteen seventy-five was a significant year. Not only did it mark the peak of enrollments, it also saw New York State and New York City enter a major financial crisis. The crisis had a profound effect on City University, where tuition was introduced, admission policies were modified, campuses were merged, and State funding increased while overall funding decreased. Following 1975, it is no longer possible to speak only of balance between public and independent sectors for, while enrollments at State University continued to grow, those at City University declined (as did its overall share).

The Tuition Assistance Program was implemented in 1974. Intended to enhance choice among institutions as well as access to postsecondary education, together with expanded Federal student aid programs it had a major effect on enrollment trends in the later 1970's and the early 80's, and probably influenced changes in enrollment shares. Between 1975 and 1980, total enrollments fell by over 20,000 students; City University absorbed the entire decline, since its drop in enrollment was greater than the net change. Enrollments at State

University and in the independent and degree-granting proprietary sectors grew in the later 70's. As a result, City University's share of aggregate enrollments fell drastically, from 25.2 percent in 1975 to only 17.7 percent in 1980. The other three sectors increased their shares as well as their total enrollments. State University's share of enrollments continued to grow; from 36 percent in 1975 it reached 38.3 percent in 1980. Significantly, after 1975 the 14 year decline in the independent sector's share reversed; from 37.2 percent in 1975 the independent sector's enrollment share grew to 41.7 percent in 1980.

As in the earlier years, the "big picture" masks differences in shares by level. In 1980, enrollments at the four-year undergraduate level were almost evenly divided between the public and independent sectors, with 52.3 percent at independent institutions (up by 7.0 points from 1975), 27.8 percent at State University (up by 2.1 points from 1975), 18.9 percent at City University (down by 9.4 points from its 1975 share), and 1.0 percent in the proprietary sector. Two-year undergraduates, on the other hand, continued to be concentrated in the public sectors, with 68.5 percent at State University (up 3.1 points from 1975) and 20.5 percent at City University (down 6.4 points from 1975). While only 4.5 percent of two-year students were in the independent sector in 1980, that was a higher share, by 1.4 points, than in 1975. The proprietary sector had 6.5 percent of two-year students in 1980.

The shares of graduate and first-professional enrollments in the independent sector grew from 62 percent of graduate students in 1975 to 68.6 percent in 1980, and from 80.3 percent of first-professional degree students in 1975 to 82.4 percent in 1980. At both levels, State University's shares declined after a decade of growth in its share; City University's share of graduate enrollments continued a decline that had begun before 1975. In each sector, however, the number of graduate students declined.

The picture in 1981 looks substantially similar to that of 1980, with one significant difference. Total enrollments grew between 1980 and 1981, by 16,505 students; as a result, 1981's enrollments, at 247 public, independent, and proprietary institutions, reached a peak exceeded only by those of 1975. All sectors shared in the growth. Only State University and the proprietary sector increased their shares of aggregate enrollments, however.

In 1981 as in 1980, four-year undergraduate enrollments were almost evenly split between the public and independent sectors, with 27.3 percent at State University, 18.5 percent at City University, 52.8 percent in the independent sector, and 1.0 percent in the proprietary sector. The public sectors continued to hold the predominant shares of two-year undergraduate enrollments, with 68.7 percent of such enrollments at State University and 20.1 percent at City University. The independent sector's share was 4.3 percent; that of the proprietary sector was 6.9 percent.

At the graduate and first-professional degree levels, too, only small shifts took place between 1980 and 1981. Independent institutions enrolled 82.8 percent of all first-professional degree students, State University, 17.2 percent. Sixty-nine percent of all graduate students were in the independent sector, 19.5 percent were at State University. City University's share of graduate enrollments rose slightly, from 11.0 percent in 1980 to 11.5 percent in 1981, reversing the decline in its share of graduate enrollments that had begun before 1975.

The configuration of higher education in this State in 1981 is significantly different from that of 1961, but also from that of 1975. It is not possible to look back on the past two decades and pick a point of "perfect balance" of enrollments. The growth of community colleges in the 60's, and of City University in the early 70's, the growth of student aid programs in the 70's, and the effect of 1975's fiscal crisis, have each made deep and lasting changes in New York's postsecondary education system. Reviewers of the balance of enrollments among the several sectors must keep those changes in mind as they look to the future.

Table 11
NEW YORK STATE
SECTOR ENROLLMENT SHARES FOR TOTAL ENROLLMENT
LEVEL BY SECTOR 1961-1981

LEVEL/SECTOR SHARES	1961*	1965	1970	1975	1980	1981
UNDERGRADUATE: 4 yr Institutions						
SUNY	34.0	20.4	24.7	25.7	27.8	27.3
CUNY		20.2	25.7	28.3	18.9	18.5
Independent	66.0	59.4	49.6	45.3	52.3	52.8
Proprietary	0.0	0.0	0.0	0.7	1.0	1.0
Total 4-yr Institutions	100.0	100.0	100.0	100.0	100.0	100.0
UNDERGRADUATE: 2 yr Institutions						
SUNY	89.3	66.7	69.6	65.4	68.5	68.7
CUNY		24.0	26.4	26.9	20.5	20.1
Independent	10.7	9.3	4.0	3.1	4.5	4.3
Proprietary	0.0	0.0	0.0	4.6	6.5	6.9
Total 2-yr Institutions	100.0	100.0	100.0	100.0	100.0	100.0
GRADUATE						
SUNY	17.5	11.3	21.8	22.1	20.4	19.5
CUNY		16.9	19.1	15.9	11.0	11.5
Independent	82.5	71.8	59.1	62.0	68.6	69.0
Total Graduate	100.0	100.0	100.0	100.0	100.0	100.0
FIRST-PROFESSIONAL						
SUNY	10.0	16.8	17.3	19.7	17.6	17.2
Independent	90.0	83.2	82.7	80.3	82.4	82.8
Total First-Professional	100.0	100.0	100.0	100.0	100.0	100.0
LEVEL						
Total Undergraduate						
4-yr Institutions	67.8	63.9	55.5	53.4	53.8	53.4
2-yr Institutions	10.5	14.9	24.1	27.6	28.9	29.5
Total Graduate	18.4	18.3	18.3	17.1	14.9	14.6
Total First-Professional	3.3	2.9	2.1	1.9	2.4	2.5
State Total	100.0	100.0	100.0	100.0	100.0	100.0
SECTOR						
TOTAL SUNY	36.0	25.5	34.7	36.0	38.3	38.4
TOTAL CUNY		19.6	24.2	25.2	17.7	17.5
Total Independent	64.0	54.9	41.1	37.2	41.7	41.6
Total Proprietary	0.0	0.0	0.0	1.6	2.3	2.5
State Total	100.0	100.0	100.0	100.0	100.0	100.0

*1961 was the first year that graduate and first-professional enrollment figures were reported separately.
Source : NYSED, Office of Postsecondary Research, Information Systems and Institutional Aid, 1982.

Table 12
NEW YORK STATE
TOTAL ENROLLMENT
LEVEL BY SECTOR 1961-1981

LEVEL/SECTOR	1961*	1965	1970	1975	1980	1981
UNDERGRADUATE: 4-yr Institutions						
SUNY	77,733	58,352	104,876	136,716	145,478	146,609
CUNY		58,161	109,327	150,137	98,591	97,804
Independent	151,134	170,170	210,983	240,677	273,584	279,007
Proprietary	0	0	0	3,521	5,158	5,155
Total 4-yr. Institution	228,867	286,683	424,340	531,051	522,811	528,575
UNDERGRADUATE: 2-yr Institutions						
SUNY	31,690	44,459	127,848	179,469	193,149	200,713
CUNY		16,027	48,631	73,697	57,624	58,684
Independent	3,793	6,208	7,273	8,646	12,628	12,517
Proprietary	0	0	0	12,597	18,191	20,046
Total 2-yr Institutions	35,483	66,694	183,752	274,409	281,595	291,960
GRADUATE						
SUNY	10,993	9,274	30,421	37,717	29,598	28,175
CUNY		13,858	26,653	26,940	16,058	16,742
Independent	51,075	58,899	82,806	105,626	99,619	99,803
Total Graduate	61,871	82,031	139,879	170,283	145,275	144,720
FIRST-PROFESSIONAL						
SUNY	1,129	2,230	2,791	3,693	4,190	4,244
Independent	10,196	11,070	13,337	15,123	19,617	20,494
Total First Professional	11,324	13,300	16,128	18,835	23,807	24,738
LEVEL						
Total Undergraduate:						
4-yr Institutions	228,867	286,683	424,540	531,051	522,811	528,575
2-yr Institutions	35,483	66,694	183,842	274,409	281,595	291,960
Total Graduate	62,068	82,031	139,880	170,283	145,275	144,720
Total First Professional	11,325	13,305	16,128	18,835	23,807	24,738
State Total	337,743	448,708	764,390	994,578	973,488	989,993
SECTOR						
Total SUNY	121,545	114,315	265,290	357,614	372,415	379,741
Total CUNY		88,064	184,701	250,774	172,273	173,230
Total Independent	216,198	246,347	314,339	370,208	405,448	411,821
Total Proprietary	0	0	0	16,118	23,352	25,201
State Total	337,743	448,708	764,390	994,578	973,488	989,993

*1961 was the first year that graduate and first-professional enrollment figures were reported separately.
Source: NYSED, Office of Postsecondary Research, Information Systems and Institutional Aid, 1982.

Table 13
NEW YORK STATE
SECTOR ENROLLMENT SHARES FOR FULL-TIME ENROLLMENT
LEVEL BY SECTOR 1961-1981

LEVEL/SECTOR SHARES	1961*	1965	1970	1975	1980	1981
UNDERGRADUATE: 4-yr Institutions						
SUNY	34.1	21.8	26.9	29.2	29.5	29.4
CUNY		18.3	21.5	23.7	16.7	16.1
Independent	65.9	59.9	51.6	46.7	53.3	53.8
Proprietary	0.0	0.0	0.0	0.4	0.6	0.6
Total 4-yr Institutions	100.0	100.0	100.0	100.0	100.0	100.0
UNDERGRADUATE: 2-yr Institutions						
SUNY	87.1	67.3	70.8	64.1	63.2	63.2
CUNY		22.3	23.6	25.0	22.4	21.8
Independent	12.9	10.4	5.6	4.6	5.5	5.3
Proprietary	0.0	0.0	0.0	6.2	8.9	9.7
Total 2-yr Institutions	100.0	100.0	100.0	100.0	100.0	100.0
GRADUATE						
SUNY	10.2	13.8	24.4	25.7	24.0	24.1
CUNY		5.1	8.3	9.7	9.6	10.1
Independent	89.8	81.1	67.4	64.6	66.4	65.8
Total Graduate	100.0	100.0	100.0	100.0	100.0	100.0
FIRST-PROFESSIONAL						
SUNY	11.7	18.3	19.3	21.5	19.5	19.1
Independent	88.3	81.7	80.7	78.5	80.5	80.9
Total First-Professional	100.0	100.0	100.0	100.0	100.0	100.0
LEVEL SHARES						
Total Undergraduate:						
4-yr Institutions	78.4	72.3	67.5	63.8	62.3	62.0
2-yr Institutions	10.8	16.1	21.4	25.8	26.9	27.2
Total Graduate	6.5	8.0	8.2	7.6	7.5	7.4
Total First-Professional	4.2	3.7	2.9	2.8	3.4	3.5
State Total	100.0	100.0	100.0	100.0	100.0	100.0
SECTOR SHARES						
Total SUNY	37.3	28.3	35.9	37.8	37.8	37.9
Total CUNY		17.2	20.2	22.3	17.1	16.6
Total Independent	62.7	54.5	43.9	38.1	42.3	42.5
Total Proprietary	0.0	0.0	0.0	1.9	2.7	3.0
State Total	100.0	100.0	100.0	100.0	100.0	100.0

*1961 was the first year that graduate and first-professional enrollment figures were reported separately.
Source: NYSED, Office of Postsecondary Research, Information Systems and Institutional Aid, 1982.

Table 14
NEW YORK STATE
FULL-TIME ENROLLMENT
LEVEL BY SECTOR 1961-1981

LEVEL/SECTOR	1961*	1965	1970	1975	1980	1981
UNDERGRADUATE: 4-yr Institutions						
SUNY	61,530	52,197	89,938	114,297	115,345	116,376
CUNY		43,860	71,669	92,483	65,333	63,684
Independent	119,024	143,787	172,327	182,655	208,372	212,781
Proprietary	0	0	0	1,692	2,292	2,391
Total 4-yr Institutions	180,554	239,844	333,934	391,127	391,342	395,232
UNDERGRADUATE: 2-yr Institutions						
SUNY	21,744	35,896	74,871	101,495	106,764	109,485
CUNY		11,880	24,986	39,560	37,833	37,760
Independent	3,218	5,563	5,935	7,341	9,269	9,182
Proprietary	0	0	0	9,851	14,947	16,922
Total 2-yr Institutions	24,962	53,339	105,792	158,247	168,813	173,349
GRADUATE						
SUNY	1,538	3,687	9,934	11,975	11,261	11,293
CUNY		1,363	3,376	4,515	4,522	4,743
Independent	13,488	21,527	27,489	30,185	31,129	30,872
Total Graduate	15,026	26,577	40,799	46,675	46,912	46,908
FIRST-PROFESSIONAL						
SUNY	1,129	2,220	2,772	3,693	4,182	4,235
Independent	8,553	9,923	11,611	13,504	17,281	17,984
Total First-Professional	9,682	12,143	14,383	17,197	21,463	22,219
LEVEL						
Total Undergraduate:						
4-yr Institutions	180,554	239,844	333,934	391,127	391,342	395,232
2-yr Institutions	24,962	53,339	105,792	158,247	168,813	173,349
Total Graduate	15,026	26,577	40,799	46,675	46,912	46,908
Total First-Professional	9,682	12,143	14,383	17,197	21,463	22,219
State Total	230,224	331,903	494,908	613,246	628,530	637,708
SECTOR						
Total SUNY	85,941	94,000	177,515	231,460	237,552	241,389
Total CUNY		57,103	100,031	136,558	107,688	106,187
Total Independent	144,283	180,800	217,362	233,685	266,051	270,819
Total Proprietary	0	0	0	11,543	17,239	19,313
State Total	230,224	331,903	494,908	613,246	628,530	637,708

*1961 was the first year that graduate and first-professional enrollment figures were reported separately.
Source: NYSED, Office of Postsecondary Research, Information Systems and Institutional Aid, 1982.

Table 15

NEW YORK STATE

SECTOR ENROLLMENT SHARES FOR PART-TIME ENROLLMENT LEVEL BY SECTOR 1961-1981

LEVEL/SECTOR SHARES	1961*	1965	1970	1975	1980	1981
UNDERGRADUATE: 4-yr Institutions						
SUNY	33.5	13.1	15.8	16.0	22.9	22.7
CUNY		30.5	41.6	41.2	25.3	25.6
Independent	66.5	56.3	42.6	41.5	49.6	49.7
Proprietary	0.0	0.0	0.0	1.3	2.2	2.1
Total 4-yr Institutions	100.0	100.0	100.0	100.0	100.0	100.0
UNDERGRADUATE: 2-yr Institutions						
SUNY	94.5	64.1	67.9	67.1	76.6	76.9
CUNY		31.1	30.4	29.4	17.5	17.6
Independent	5.5	4.8	1.7	1.1	3.0	2.8
Proprietary	0.0	0.0	0.0	2.4	3.0	2.6
Total 2-yr Institutions	100.0	100.0	100.0	100.0	100.0	100.0
GRADUATE						
SUNY	20.1	10.1	20.7	20.8	18.6	17.3
CUNY		22.5	23.5	18.1	11.7	12.3
Independent	79.9	67.4	55.8	61.0	69.6	70.4
Total Graduate	100.0	100.0	100.0	100.0	100.0	100.0
FIRST-PROFESSIONAL						
SUNY	0.0	0.9	1.1	1.2	0.3	0.4
Independent	100.0	99.1	98.9	98.8	99.7	99.6
Total First-Professional	100.0	100.0	100.0	100.0	100.0	100.0
LEVEL SHARES						
Total Undergraduate:						
4-yr Institutions	44.9	40.1	33.6	36.7	39.2	37.8
2-yr Institutions	9.8	11.4	28.9	30.4	32.7	33.7
Total Graduate	43.8	47.5	36.8	32.9	28.5	27.8
Total First-Professional	1.5	1.0	0.7	0.4	0.7	0.7
State Total	100.0	100.0	100.0	100.0	100.0	100.0
SECTOR SHARES						
Total SUNY	33.1	17.4	32.6	33.1	39.1	39.3
Total CUNY		26.5	31.4	29.9	18.7	19.0
Total Independent	66.9	56.1	36.0	35.8	40.4	40.0
Total Proprietary	0.0	0.0	0.0	1.2	1.8	1.7
State Total	100.0	100.0	100.0	100.0	100.0	100.0

*1961 was the first year that graduate and first-professional enrollment figures were reported separately.

Source : NYSED, Office of Postsecondary Research, Information Systems and Institutional Aid, 1982.

Table 16

NEW YORK STATE
PART-TIME ENROLLMENT
LEVEL BY SECTOR 1961-1981

LEVEL/SECTOR	1961*	1965	1970	1975	1980	1981
UNDERGRADUATE: 4-yr Institutions						
SUNY	16,203	6,155	14,292	22,419	30,133	30,233
CUNY		14,301	37,658	57,654	33,258	34,120
Independent	32,110	26,383	38,656	58,022	65,212	66,226
Proprietary	0	0	0	1,829	2,866	2,764
Total 4-yr Institutions	48,313	46,839	90,606	139,924	131,469	133,343
UNDERGRADUATE: 2 yr Institutions						
SUNY	9,946	8,563	52,977	77,974	86,385	91,228
CUNY		4,147	23,735	34,137	19,791	20,924
Independent	575	645	1,338	1,305	3,359	3,335
Proprietary	0	0	0	2,746	3,247	3,124
Total 2-yr Institutions	10,521	13,355	78,050	116,162	112,782	118,611
GRADUATE						
SUNY	9,455	5,587	20,487	25,742	18,337	16,882
CUNY		12,495	23,277	22,425	11,536	11,999
Independent	37,587	37,372	55,317	75,441	68,490	68,931
Total Graduate	47,042	55,454	99,081	123,608	98,363	97,812
FIRST-PROFESSIONAL						
SUNY	0	10	19	19	8	9
Independent	1,643	1,147	1,726	1,619	2,336	2,510
Total First-Professional	1,643	1,157	1,745	1,638	2,344	2,519
LEVEL						
Total Undergraduate:						
4-yr Institutions	48,313	46,839	90,606	139,924	131,469	133,343
2-yr Institutions	10,521	13,355	78,050	116,162	112,782	118,611
Total Graduate	47,042	55,454	99,081	123,608	98,363	97,812
Total First-Professional	1,643	1,157	1,745	1,638	2,344	2,519
State Total	107,519	116,805	269,482	381,332	344,958	352,285
SECTOR						
Total SUNY	35,604	20,315	87,775	126,154	134,863	138,352
Total CUNY		30,943	84,670	114,216	64,585	67,043
Total Independent	71,915	65,547	97,037	136,387	139,397	141,002
Total Proprietary	0	0	0	4,575	6,113	5,888
State Total	107,519	116,805	269,482	381,332	344,958	352,285

* 1961 was the first year that graduate and first-professional enrollment figures were reported separately.

Source : NYSED, Office of Postsecondary Research, Information Systems and Institutional Aid, 1982.

Net Cost of Attendance

The enrollment shares of individual colleges and universities, or of types of institutions, or of entire sectors, are influenced by many factors. Certainly one of these is the net cost of attendance at one college, institutional type, or sector, as compared to net cost at another. Net cost of attendance in this discussion is the tuition and other expenses students face less any offsetting student aid.

Studies in the past have shown a small relationship between cost of attendance and college participation rates. However, the estimates of price elasticity of demand provided by these studies were all based on data collected in the 1960's and the early 1970's, when costs and student aid were both less significant than they are today. For this reason these studies may be poor guides to policy for the 1980's.

To deal with today's more complex and rapidly changing environment, the Department is now developing procedures for monitoring net cost of attendance for specific categories of students and institutions. In addition to calculating net costs of attendance for each year starting with 1980-81, possible relationships between net costs and other factors such as enrollment shares will be studied. Over a period of years this effort is expected to provide planners and policy makers at all levels with valuable information and insights on which to base decisions about State support for higher education.

Net Cost Indices

Preliminary analyses and discussions of the problem of estimating net cost of attendance have resulted in several guidelines that will be followed in preparing the estimates.

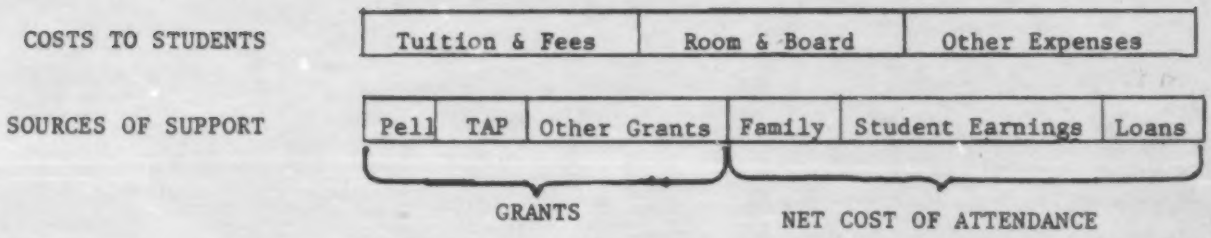
1. A standard definition of net cost of attendance will be used incorporating as comprehensive a definition of cost and student aid as possible. All data will be saved so that revised estimates can be prepared if a new definition is adopted.

2. Estimates will be prepared for several standardized hypothetical dependent undergraduate students so that year-to-year comparisons of net cost can be made and the impact of changes in student aid programs can be assessed.

3. Estimates will be prepared for several standardized types of institutions so that comparisons of net cost can be made and changes in net cost ratios can be monitored.

Figure 3 shows the major components of net cost of attendance as it will be calculated in these analyses. Using data from a standard source, estimates of the total cost of attendance will be compiled for each of six categories of institutions in the State as shown in Figure 4. Then, using standard definitions and procedures, the expected entitlement awards (i.e., TAP and Pell grants) will be calculated for a number of standardized hypothetical undergraduate students — six categories are shown in Figure 4. Then an estimate of other grants and awards will be made, based on data on the proportion of students receiving these other awards and assumptions about likely distribution of the aid. A subtraction of the entitlements plus other grants from total cost yields the estimates of net cost of attendance that will appear in Figure 4. This will be examined more closely to estimate the relative importance of loans in covering college costs for the different types of undergraduate students and institutions.

Figure 3: MAJOR ELEMENTS OF NET COST OF ATTENDANCE



NOTES: 1) The sizes of the bars and of the different segments of each bar will vary from institution to institution and student to student.

2) Net Cost of Attendance is the amount of funds that must be provided by the student and his family to enable him to attend a particular college.

Available data are not sufficient to develop these estimates without assumptions. Institutional grants can be awarded on any basis an institution chooses. Pell grants depend in part on family assets. Loan utilization may depend in part on socio-economic background. Special care will be taken to document the specific criteria and assumptions used in estimating the types of aid used in preparing the net cost estimates. This will permit comparable estimates to be prepared in future years.

As net cost estimates become available for multiple years, special analyses of the data will be performed to help guide planners and policy makers. Two kinds of analysis are envisioned:

a) Changes in net cost of attendance for different categories of students will be reviewed to identify inequities in student aid coverage. If such inequities result in reduced college participation — as determined by other analyses — then appropriate adjustments in student aid could be recommended.

b) Changes in net cost ratios between particular institutional groupings will be compared with changes in enrollment shares to determine if balance and diversity are affected by changing net cost ratios. These analyses may be based on a net cost ratio of the following form, where the numbers 1 and 2 represent specific categories of undergraduates at specific types of institutions (i.e., two boxes in the matrix of Figure 4):

$$\text{Net Cost Ratio}_{1:2} = \frac{\text{Net Cost}_1}{\text{Net Cost}_2}$$

Again, if undesirable changes in enrollment shares can be related to changes in net cost ratios, the State may choose to redirect aid so as to retard or reverse the enrollment shifts.

Figure 4: CATEGORIES OF INSTITUTIONS AND UNDERGRADUATE STUDENTS FOR WHICH NET COST OF ATTENDANCE WILL BE ESTIMATED ON AN ANNUAL BASIS

STUDENT CATEGORY		INSTITUTIONAL SECTOR					
		City University		State University		Independent	
		4-Year	Comm. Coll.	4-Year	Comm. Coll	High Cost	Low Cost
Low Income	Residential						
	Commuter						
Medium Income	Residential						
	Commuter						
High Income	Residential						
	Commuter						

NOTES: 1) Calculations will be for dependent undergraduate students.
2) Exact definitions of income categories and high cost/low cost institutions will be based on empirical analyses.

Chapter 3

RESOURCES

Student Aid

Student aid programs constitute an important element in the financing of post-secondary education. The growth of these programs at Federal, State, and institutional levels has reduced financial barriers and extended educational opportunity. In recent years there has been an overall growth in funding for programs in order to meet increasing student attendance costs. Table 17 shows this growth, which amounted to almost 25 percent over three years.

Table 17

STUDENT AID AVAILABLE IN NEW YORK STATE FROM MAJOR STATE AND FEDERAL PROGRAMS

(excludes minor State and Federally-operated programs, SUNY tuition waivers, and institutional student aid)

Program	Amounts (in millions) and Percent[1] 1979-80		1980-81		1981-82	
State						
Tuition Assistance Program	$ 251.3	17.0%	$ 246.9	15.8%	$ 288.6	15.7%
Regents Scholarships	19.3	1.3	17.8	1.1	19.3	1.0
State Supplemental Loans	33.0	2.2	41.0	2.6	30.0	1.6
Total	$ 303.6	20.5%	$ 305.7	19.5%	$ 338.1	18.3%
Federal						
Pell Grants	$ 345.9	23.4%	$ 312.0	19.9%	$ 309.3	16.8%
Supplemental Educational Opportunity Grants	25.5	1.7	30.0	1.9	28.7	1.6
State Student Incentive Grants[2]	7.3	.5	6.8	.4	6.8	.4
Guaranteed Student Loans[3]	715.2	48.4	833.2	53.2	1,100.0	59.6
National Direct Student Loans[4]	31.6	2.1	26.3	1.7	17.3	.9
College Work Study[5]	48.0	3.2	52.3	3.4	44.3	2.4
Total	$1,173.5	78.0%	$1,260.4	80.5%	$1,506.2	81.7%
GRAND TOTAL	$1,477.1	100.0%	$1,566.1	100.0%	$1,844.3	100.0%

[1] Detail may not add to 100, due to rounding.
[2] This program supplements the State expenditure for the Tuition Assistance Program.
[3] The amount represents the loan capital, money made available by private lenders as a result of government guarantees and subsidies.
[4] The amount represents Federal capital only. Institutions have additional loan capital consisting of institutional matching funds, repayments of previous loans and cash on hand.
[5] The amount represents only the Federal contribution. Institutions provide at least a minimum contribution of 20 percent from the institution and, in some cases, off-campus, non-profit employers.
[6] Includes $8.8 million for the Supplemental Tuition Assistance Program.

Source: NYSED, Office of Finance and Facilities, 1982.

At both State and Federal levels there have been shifts in program funding during the three year period. At the State level, expenditures for the Tuition Assistance Program (TAP) increased almost 15 percent. Among Federal programs, there was a decline in 1981-82 for all the major programs except the Guaranteed Student Loan Program (GSLP) and State Student Incentive Grants (SSIG). The reductions are the result of lower appropriations for the campus-based programs (Supplemental Educational Opportunity Grants, National Direct Student Loans, and College Work Study) and eligibility restrictions in the Pell Grants program aimed at reducing program costs. The impressive expansion of the GSLP (54 percent in two years) accounts for much of the overall growth, due to legislation which greatly broadened eligibility.

During this period there were important changes in the State and Federal programs which account for some of the shifts.

At the Federal level, after a year of debate, Congress passed the Higher Education Amendments of 1980. In summary, these amendments increased the loan limitations of the GSL and NDSL programs, and increased the interest rates on new loans under these programs, respectively, from 7 to 9 percent and from 3 to 4 percent. In addition, the Amendments authorized increases in the Pell Grant awards over a five year period and raised the maximum award under the Supplemental Educational Opportunity Grant Program from $1,500 to $2,000.

Less than one year later, in response to President Reagan's request for reductions in Federal spending for education and other programs, Congress enacted the Postsecondary Student Assistance Amendments of 1981. The major effect of these amendments has been to limit or reduce the expansion provisions in the Higher Education Amendments of 1980. The changes included limitation of GSL eligibility through a financial needs test where the adjusted family income exceeds $30,000, an origination fee of 5 percent on the loans, the establishment of Auxiliary Loans to Assist Students (ALAS) to provide additional loans (with an interest rate of 12 to 14 percent) to graduate students and independent undergraduate students, raising the interest rate on National Direct Student Loans from 4 to 5 percent, reducing the award scale and expenditures for Pell Grants and decreasing expenditures for the three campus-based programs. The effect of these changes is shown in the 1981-82 column of Table 17. The Guaranteed Student Loan Program was not significantly affected as the program changes did not become effective until October 1, 1981, and most borrowers had secured their 1981-82 loans before that date.

At the State level, program expansion has been moderate and limited to growth in Tuition Assistance Program expenditures while activities were initiated to improve the integrity of the programs. In 1980, the last year of a phase-in of a TAP award schedule initiated in 1977, the Higher Education Services Corporation implemented an income verification system for all TAP recipients and their families. During 1980 the Regents approved revised Commissioner's Regulations, effective September 1981, which strengthened academic standing requirements for holders of State awards. These regulations were amended in 1981 to provide for a phased-in implementation in 1981-82 for first-time recipients of State awards.

The 1981 Legislature enacted a number of significant student aid measures. TAP was expanded through an improved award scale for undergraduates. Commencing in 1981-82, the maximum award for first-time undergraduate TAP recipients increased from $1,800 to $2,200, or tuition, whichever is less, when the family net taxable income is $4,000 or less. The family income limit for eligibility was extended from $20,000 to $25,000 and the

minimum award increased from $200 to $250. The latter two changes also apply to other undergraduate students whose maximum award remains at $1,800 or tuition, whichever is less. In addition to the changes in TAP awards, a new program, the Supplemental Tuition Assistance Program (STAP), was established to provide up to one year of TAP awards to undergraduate students who are educationally disadvantaged, carrying a remedial workload and are unable to meet the Commissioner's Regulations on academic standing. During 1981, the Legislature also approved a program under which the State will reimburse independent colleges for their share of expenditures under the Federal College Work Study Program. Commencing in 1981-82, State funding is being phased-in over a three year period.

The Regents continue to recommend improvements in student aid programs at both the State and Federal level. These recommendations include extension of TAP eligibility to half-time undergraduates and the elimination of the reduction in TAP awards for upper-division students. At the Federal level, the Regents have recommended that Congress maintain stability in the funding of programs for 1982-83 while considering a number of alternative program changes for the future, especially in the Guaranteed Student Loan Program, which currently is the largest and most expensive program.

At the time of this report, it appears that there will be moderate reductions in the campus-based and Pell Grants programs in 1982-83, with the maximum Pell Grant at $1,674, as compared with $1,670 for 1981-82. In the case of the GSLP, it appears that the eligibility requirements will be similar to those which become effective October 1, 1981. The Higher Education Services Corporation has estimated that those requirements would reduce loan volume by about $145 million in 1982-83, with about 87,000 students receiving lower amounts of loans or no loans.

In order to understand the effectiveness of State programs, it is necessary to obtain and analyze data on Federal and State programs and better relate the Federal effort to that of the State. The collection and analysis of data, a large task, has begun. During 1981-82, the Higher Education Services Corporation conducted a Student Survey Project to ascertain how students in the State are financing their education in 1981-82. A sampling of various kinds of students, including full and part-time, recipients and non-recipients, and undergraduates and graduates, was used. The survey report will provide information on kinds of assistance received, educational costs, and other characteristics of students. Another data collection activity was initiated in 1981-82 by the Education Department. Through the annual data collection program of the Higher Education Data System (HEDS), postsecondary institutions in the State have furnished considerable amounts of information about institutional and Federal student aid programs (grants, loans, and student employment), particularly amounts of aid and numbers and income characteristics of applicants and recipients. These data will be augmented by reports from the Higher Education Services Corporation on the various State programs. Figure 5a - 5d, in Appendix D, illustrates the format for some of the kinds of data on undergraduate students which the Department report, scheduled for completion in the fall of 1982, will include. Data on graduate students will also be provided.

Although these two data collection efforts are being conducted separately, analyses of the information should provide considerable information about educational financing patterns for a variety of students with different educational costs. The analysis of information should lead to projections of alternative arrangements of programs and their costs in conjunction with probable changes in the postsecondary environment.

Government funded student aid programs serve the public interest by fostering educational opportunity. While such programs serve individual and social purposes, they also benefit institutions by encouraging enrollment in a variety of programs and providing an

important source of revenue. The collection of student aid data through HEDS should provide some insights on the relationship of programs to tuition and total revenues. In addition, the Department plans to prepare a paper on net student costs and the ratio of such costs in the public sector to those in the independent sector. Student financial aid is an important element in the consideration of net costs. For the purpose of this report, however, only the utilization of two major programs, TAP and GSLP, by sectors, is shown. Tables 18 and 19 provide utilization rates for TAP and GSLP recipients by level of enrollment at degree granting institutions only. TAP utilization rates are affected by a number of factors which control eligibility for awards, including State residence and family income levels. Overall, about one-half of the full-time undergraduates received TAP awards in 1980-81, with City University showing the highest utilization rate. When State residence is considered, the utilization rate increases. For example, in 1979-80 the undergraduate TAP recipients represented about 60 percent of full-time undergraduates who were New York State residents. At the graduate level, the figure was approximately 36 percent. At the graduate level, less than one quarter of all full-time students received TAP awards, with the State University having the highest utilization rate. Under the Guaranteed Student Loan Program, however, the utilization rates follow a different pattern. Less than one-half of undergraduate students were borrowers. While the GSL utilization rate for independent and State University undergraduates is close to that for TAP utilization in those sectors, there is a radical difference for City University undergraduates, where one-fifth are borrowers, contrasted with three-quarters who are TAP recipients. This difference is probably largely due to the fact that CUNY students are commuting students with somewhat lower attendance costs. Many of these students are also from low income families and are eligible for large amounts of Pell and TAP grants. At the graduate level there is also a marked difference in utilization rates, with GSL participation at a consistently higher level in all sectors. Because TAP awards at the graduate level are low, and because there are no significant Federal grant programs at the graduate level, there is a heavy dependency on loans to meet educational costs.

Table 18

UTILIZATION RATES FOR TAP RECIPIENTS BY LEVEL OF ENROLLMENT AND TYPE OF INSTITUTION
1980-81

	1980-81 Enrollment (Full-time)	Number of TAP Recipients	TAP Recip. as % of Enrollment
Undergraduate	543,050	271,054	49.9
State University	222,078	102,752	46.3
State-operated	132,450	60,310	45.5
Community Colleges	89,628	42,442	47.4
City University	103,209	77,717	75.3
Senior Colleges	72,435	49,323	68.1
Community Colleges	30,774	28,394	92.3
Independent Colleges	217,763	90,585	41.6
Graduate	68,249	16,524	24.2
State University	15,400	5,104	33.1
City University	4,522	1,341	29.7
Independent Colleges	48,327	10,079	20.9

Source: NYSED, Office of Finance and Facilities, 1982.

Table 19

UTILIZATION RATE FOR GSL BORROWERS BY
LEVEL OF ENROLLMENT AND TYPE OF INSTITUTION
1980-81

	1980-81 Full-time Enrollment	Number of Full-time Borrowers	Borrowers as % of Enrollment
Undergraduate	543,050	208,264	38.4
State University	222,078	97,529	43.9
State-operated	132,450	67,636	51.1
Community Colleges	89,628	29,893	33.4
City University	103,209	20,637	20.0
Senior Colleges	72,435	14,414	19.9
Community Colleges	30,774	6,223	20.2
Independent Colleges	217,763	90,098	41.4
Graduate	68,249	41,502	60.8
State University	15,400	9,594	62.3
City University	4,522	2,076	45.9
Independent Colleges	48,327	29,832	61.7

Source: NYSED, Office of Finance and Facilities, 1982.

Tables 20 and 21 provide a distribution of TAP awards and GSLP loans by sector and level. These figures exclude TAP awards to non-degree students in the State, loans to non-degree students in the State, and loans to all New York students attending out-of-state institutions. Although the numbers of public college TAP recipients at the undergraduate level represent about 67 percent of the total, they receive 42 percent of the undergraduate payments, as shown in Table 20. The lower proportion of payment reflects the lower public college tuition charges to which TAP awards are applied. At the graduate level, where tuition charges in all sectors exceed the $600 maximum TAP award, the proportions of payments in each sector are closer to the proportions of recipients.

Under the Guaranteed Student Loan Program, where the level of loans is related to total educational costs rather than tuition only, the proportion of loan dollars generally bears a closer relationship to the percentage of borrowers in the various sectors, as indicated in Table 21. The utilization rates in 1980-81 were not affected by the family income of borrowers, as eligibility requirements did not include income. Income criteria for 1981-82 loans became effective on October 1, 1982, after most students had borrowed. In 1982-83, however, GSL eligibility will be affected by income requirements and the balance shown in Table 21 may be altered.

Table 20

TAP PAYMENTS BY SECTOR
1980-81

	1980-81		
	Amount (in millions)[1]	Percent of Total[1]	Percent of TAP Recipients
Undergraduate	$218.6	100.0	100.0
State University	54.0	24.7	37.9
State-operated	34.0	15.6	22.3
Community Colleges	20.0	9.1	15.6
City University	49.9	22.9	28.7
Senior Colleges	31.2	14.3	18.2
Community Colleges	18.7	8.6	10.5
Independent Colleges	114.7	52.3	33.4
Graduate	$ 6.3	100.0	100.0
State University	1.9	30.2	30.9
City University	.5	7.9	8.1
Independent Colleges	3.8	60.3	61.0

[1] Detail may not add to total due to rounding.

Source: NYSED, Office of Finance and Facilities, 1982.

Table 21

GUARANTEED STUDENT LOAN VOLUME
BY SECTOR
1980-81

	Loan Volume (in millions)[1]	Percent of Loan Volume	Percent of Full-time Borrowers
Undergraduate	$410.0	100.0	100.0
State University	171.1	41.7	46.8
State-operated	123.9	30.2	32.5
Community Colleges	47.2	11.5	14.3
City University	35.3	8.6	9.9
Senior Colleges	25.1	6.1	6.9
Community Colleges	10.2	2.5	3.0
Independent Colleges	203.6	49.7	43.3
Graduate	$193.5	100.0	100.0
State University	33.2	17.2	23.1
City University	9.4	4.9	5.0
Independent Colleges	150.9	77.9	71.9
TOTAL	$603.5		

[1] Loan volume includes loans for 30,813 part-time students, about 11 percent of all borrowers. The amounts of loans for these students are not available.

Source: NYSED, Office of Finance and Facilities, 1982.

Facilities

The 1980 Plan's fourth goal, Effective Use of Resources, proposed an objective that "By 1990 the amount of non-residential space in New York's postsecondary facilities will decrease, in comparison with 1980, but space will not decrease by as great a proportion as enrollment." In addition, the objective called for an increase in the proportion of space judged to be in good condition. A major activity associated with the objective is the development of a Higher Education Construction Impact Statement for use by all parties that review proposals for new major capital construction in higher education.

The Governor did not approve the objective but encouraged his staff to work with the Department in developing the Impact Statement. The Governor's primary objection to the objective concerned the use of 1980 space and enrollment data in a baseline fashion against which 1990 data would be measured. Given an institution which in 1980 had a space surplus, future enrollment reductions at that particular school could, the Governor wrote, justify space reductions proportionately higher than enrollment reductions at that school. This is, of course, quite correct and not in conflict with the objective, which was intended only for application to the State's postsecondary education facilities in aggregate. The Governor noted that postsecondary institutions should move to close spaces which are not required and make more intensive use of those spaces which remain, and he called for development of "technique and data to better judge the existence of space surpluses or deficits." The Department intends to continue its efforts to develop such measurements and a discussion of some first steps in this direction is contained in the section. below. entitled "Comparative Indicators."

Excess space does not automatically imply the ability to close or dispose of the excess. It is difficult to generalize about the potential for the disposal of excess facilities which are owned free of debt by an institution. It is impossible to generalize about facilities for which financing is still being amortized, because original financing covenants often limit alternate use of facilities. Individual campus building configuration will often dictate what reductions in space may be possible. Even if space is reduced we can not always expect a directly proportionate drop in the cost of operation.

The Governor termed the Higher Education Construction Impact Statement, proposed in the 1980 Plan, an "interesting concept" and called for its further development. The purpose of the Impact Statement is to make possible reviews analogous in nature and content, although not in process, for both independent institutions seeking financing from public agencies, and public institutions. The proposed Impact Statement does not entail any additional review steps in the processes now in practice. To facilitate the prompt implementation of the Impact Statement procedure, the Governor directed the Budget Division and Education Department to exchange information. This information exchange has begun and it is expected to result in a standard body of all necessary data elements for review of future funding requests by the appropriate parties.

Comparative Indicators

In an initial response to the Governor's call for data to better judge the existence of space surpluses or deficits, the Regents present in this Progress Report first a comparative analysis of the amount of New York's postsecondary non-residential space and then a series

of comparative indicators derived from the 1979 "Facilities" and 1981 "Student Credit Hours Taught by Time of Day" Higher Education Data System (HEDS) reports by institutions. Table 22 shows total Net Assignable Square Feet* (NASF) by selected room use categories for SUNY, CUNY, Independent, and Proprietary sectors, and the total for all. Only a core group of room use categories, consisting of specific non-residential facilities, is displayed in detail. Four specific room uses (including their collateral service facilities) compose the non-residential core group and are detailed in the table:

- Classrooms/Lecture Halls
- Laboratories
- Offices
- Libraries

The four categories are broad-based and only representative of the type of comparative analysis in which the Education Department is engaged. More detailed analyses are anticipated for inclusion in later reports. The core group represents the type of space which should be more comparable than other types of space, which can vary widely.

Other non-residential facilities, such as Special Use, General Use, Supporting Facilities, and Health Care, are aggregated under "Other Non-Residential Facilities" and represent 38 percent of the non-residential facilities. The total non-residential facilities comprise 72 percent of all institutional space. Over 32 million NASF of residential space and 1.7 million NASF of unclassified space are subject to study at a future date. Residential space may demand different analysis mechanisms than those explored for use with non-residential space.

Table 22 shows the distribution of non-residential space, by room use categories, among the sectors of postsecondary education. State University and City University community colleges are separated from other State-operated or CUNY units because the community colleges are subject to different controls than the other public institutions. The table shows that there is a total of nearly 91 million net assignable square feet of non-residential space at New York's postsecondary institutions. The overall space is divided almost evenly between the public and independent sectors. SUNY and CUNY comprise 49.5 percent and the Independent and Proprietary sectors account for 50.5 percent of the total space. It is important to consider these figures in the context of enrollment shares. Public institutions account for 56 percent of the 1980 student headcount (SUNY 38.3 percent and CUNY 17.5 percent). The independent institutions had 41.6 percent and proprietary schools 2.5 percent of the total headcount. Table 23, discussed in a later section of this report, looks at space in the context of full-time equivalent day students, a more meaningful enrollment measure for facilities analyses than gross headcount.

Important differences appear in the composition of space totals between the sectors. While the Independent and Proprietary sectors have 56 percent of the total classroom facilities statewide compared to the Public sectors' 44 percent, the shares of laboratory facilities are reversed. SUNY and CUNY, with 10.5 million NASF of laboratory facilities, comprise 56 percent of the total statewide laboratory facilities. The total 18.83 million NASFof office space and 8.68 million NASF of library space are each divided almost equally between public and independent schools.

*Net assignable square feet includes the sum of the floor areas of a building included within the outside faces of exterior walls for all stories, or areas that have floor surfaces, less the non-assignable area. Non-assignable area includes that portion of the building areas not available for assignment to building occupants, but necessary for general operation. Such areas include circulation, custodial, mechanical, and structural areas.

Table 22

TOTAL NET ASSIGNABLE SQUARE FEET FOR SELECTED ROOM USE
at New York State's Postsecondary Institutions, 1979
(in thousands and rounded to nearest 10,000 NASF)

	SUNY		CUNY				
	Community Colleges (1)	All Other State Operated (2)	Community Colleges (3)	All Other (4)	Independent* (5)	Proprietary (6)	Total (7)
1. Total Classroom Facillities	1,160	1,890	370	930	5,350	280	9,990
2. Total Laboratory Facilities	1,820	6,500	430	1,730	8,240	150	18,890
3. Total Office Facilities	1,290	5,610	660	2,020	9,150	150	18,890
4. Library Facilities	790	2,570	190	650	4,460	20	8,680
Subtotal (1-4)	5,060	16,570	1,640	5,340	27,210	560	56,390
5. Other Non-Residential Facilities	2,940	11,000	670	1,940	17,790	140	34,480
6. Total Non-Residential Facilities (1-5)	8,000	27,570	2,310	7,250	45,000	700	90,860

*excludes seminaries

Source: NYSED, Office of Finance and Facilities, 1982.

Table 23

TOTAL NET ASSIGNABLE SQUARE FEET FOR SELECTED ROOM USE CATEGORIES BY FULL-TIME EQUIVALENT DAY STUDENT ENROLLMENT at New York State's Postsecondary Institutions

	SUNY		CUNY				
	Community Colleges	All Other State Operated	Community Colleges	All Other CUNY	Independent	Proprietary	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Total Classroom Facilities	12.4	12.1	12.2	11.8	22.6	16.1	15.4
2. Total Laboratory Facilities	19.6	38.7	14.1	21.9	25.1	9.3	26.2
3. Total Office Facilities	13.9	33.9	21.6	25.6	29.3	6.1	26.5
4. Library Facilities	8.5	16.9	6.1	8.3	14.8	1.2	12.6
Subtotal (1-4)	54.4	101.6	54.0	67.6	89.8	32.6	80.8
5. Other Non-Residential Facilities	31.9	66.3	21.9	24.5	63.0	8.3	50.0
7. Total Non-Residential Facilities (1-5)	86.3	167.9	75.9	92.1	152.9	40.9	130.8

Note: This table compares facilities data reported in 1979 with Full-Time Equivalent Day Student counts reported in 1981.

Source: NYSED: Office of Finance and Facilities, 1982.

The aggregate amounts of NASF by sector and room use do not by themselves tell anything more than how much square footage exists. Condition, adequacy, and level of effective use of the facilities are not addressed in Table 22. Differences in the composition of the aggregate figures reflect, to an extent, the different missions, needs, and even architectural traditions of the sectors.

Table 23 shows the ratio of space, as shown in Table 22 facilities data, to full-time equivalent day (FTED) students. This presentation is the first step in deriving an indicator series which uses the number of students as ratio denominators. FTED students are those who are enrolled in courses scheduled to start between the hours of 7:01 A.M. and 5:59 P.M., Monday through Friday. Previous displays in other reports expressed facilities by net assignable square feet per full-time equivalent students (FTES), which included evening division and weekend students. Two institutions with equal classroom space, equal FTED's, but unequal FTES's because of one college's large evening division, might be viewed very differently by FTED and FTES methods; the college with an evening division would appear to have less space per student by the FTES ratio when, in fact, there would be no difference in the need for space between the two. Table 23 uses the same format as Table 22, but a number of institutions have been excluded from Table 23. In order to approach a reasonable level of comparability, Table 23 excludes data from the health profession schools, nursing schools and 15 specialized colleges of art, music, law, and so forth. Also six institutions were unable to supply FTED enrollment data. Regretfully, three of these were large universities.

Statewide, there are 130 non-residential NASF per full-time equivalent day student across all sectors. SUNY community colleges have just over half as much space per FTED student (86.3 NASF) as the State-operated campuses (167.9 NASF), while the difference is much smaller at CUNY, with 75.9 NASF at the community colleges and 92.1 NASF at all other CUNY units. The Independent sector is only slightly lower in overall NASF per FTED than SUNY State-operated campuses (152.9 NASF compared with 167.9 NASF). Proprietary institutions provide the least non-residential space per FTED student (40.9 NASF) — just over half as much as CUNY community colleges.

The four categories of room use shown in Table 23 — classrooms, laboratories, offices, and libraries — account for over 70 percent of all non-residential space, in net assignable square feet. Overall, the pattern of assignable space per FTED student for these four room-use categories is very similar to that for total non-residential space. Approximately 12 NASF of classroom space are available per FTED student at both types of SUNY and CUNY units, compared to 20 NASF at Independent institutions and 16.1 NASF at Proprietary institutions.

An average of 26 NASF of laboratory space is available statewide per FTED student. As might be expected, community colleges provide about half as much space per student as other SUNY and CUNY units. Both types of SUNY units (community colleges and State-operated) have somewhat more lab space per FTED than their CUNY counterparts. Independent institutions fall between comparable CUNY and SUNY units with 25.1 NASF per FTED. The proprietary sector provides the least laboratory facilities per FTED —9.3 NASF.

Office space is distributed similarly to laboratory space, with the exception that the difference between CUNY community colleges and other CUNY units was much less (5 NASF) than between SUNY community colleges and all other SUNY units (10 NASF).

Finally, statewide an average of 12.6 NASF of library space is provided per FTED student. Library space per FTED ranges from a low of 1.2 NASF in proprietary institutions to a high of 16.9 at SUNY State-operated institutions. Independent institutions, with 14.8 NASF per FTED, are slightly above the statewide average.

The Department expects that between this report and the 1984 Statewide Plan, the facilities and FTED data will be further refined. Data problems still exist in both facilities and FTED reports. For example, main and branch campus data need to be carefully segregated, and enrollment at extension centers and sites must be excluded. It is only recently, with the proliferation of outreach activity among institutions, that such segregation has become important. Twenty-three public, independent, and proprietary institutions now have a total of over 50 branch campuses, while only a short time ago there were only the main campuses. In addition, there are large numbers of extension centers and sites where instruction is offered. Data collection efforts have not kept pace with this very recent phenomenon.

Indicators of space per student do not themselves serve to identify excesses or deficiencies of space nor are they to be considered standards. The most recent statewide space standards were developed during the late 1960's for use in construction projects. They were adopted as planning standards in 1969 by the Regents, who at that time acknowledged the standards to be only partially complete, as an amendment to the 1968 Statewide Plan, which was approved by the Governor. Further refinement and development of the standards was not carried forward. Today, therefore, the standards may be dated and are incomplete, and resources are not available to replicate the original effort and expertise devoted to space standards during the late 1960's, a time of abundant Federal support for this activity. The Department intends to pursue its research into the experiences other states have had in the area of room use standards. Some states have devoted resources to the development of standards and the Department will review those standards for possible use in New York.

The standards were originally intended for use in judging the adequacy of plans for new construction. Classroom standards, for example, are expressed in terms of the net square feet required for each station or desk in a room. Certain assumptions about the total average hours of use per week and the percentage of utilization per station were made. These standards are comparable to nationwide standards, such as those developed by the Western Interstate Commission for Higher Education (WICHE) and promulgated in the Higher Education Facilities Planning and Management Manuals (1971), which are generally acknowledged to be one of the best sources of information on space criteria. To illustrate this comparability, WICHE and Regents classroom standards and assumptions are displayed:

Classrooms

	WICHE		Regents
	Average	Range	
Room Utilization Ratio	30 hrs/wk	20-32 hrs/wk	30 hrs/wk
Station Occupancy Ratio	65%	45%-85%	60%
Assignable Square Feet Per Student Station	18 ASF	10-25 ASF	16 ASF

The Regents also adopted, in the amendment to the 1968 Statewide Plan, facilities standards for certain types of Class Laboratories, Libraries, and Academic Offices. The Regents recognize that no single utilization, occupancy, or assignable square feet per student station figure will apply at all times to all types of space or institutions. The nature and range of instruction or laboratory use may vary and therefore make data comparison among institutions misleading. The use of comparative analysis based on current enrollment levels, however, provides certain reasonable benchmarks of space utilization. The ratios of space by room use categories to FTED students are important indicators which, while they are not standards to be adhered to, indicate to decision-makers the need for further examination of specific situations. Given the diverse offerings and institutional missions of New York's system of postsecondary education, one institution may quite legitimately have more or less square feet per FTED student in a given room use category than another institution or group of institutions.

The Governor's response to the 1980 Plan indicated that postsecondary institutions should move "...more aggressively to close spaces which are not required and to learn to make more intensive use of the spaces which remain." The Comparative Indicators are a point from which an institution may start a self assessment of its own use of facilities. This is similiar to what the Regents will ask institutions to prepare for the 1984 Plan. Institutions will be requested, in an early Bulletin of the Plan, to use the Comparative Indicators and their own enrollment projections in conducting self analyses of facilities needs and plans for the future at the institutional level. Taken together, responses to the Regents call for facility plans will contribute to a greater understanding of institutional need for facilities in the upcoming period of expected enrollment decline and scarce resources.

The 1984 Plan and Bulletin

The Comparative Indicators described in this Progress Report are a sampling of the types of statistics which the Department will prepare for the 1984 Statewide Plan. It is expected that statistics will be presented not just according to sector but also by institutional typology within sectors, so as to make the data more meaningful to individual institutions and for comparative purposes. The Regents do not intend for these measures to be regarded as conclusive in reviewing individual projects. Both historical information and the data which will be requested by the Bulletin of the 1984 Plan (scheduled to be issued in December 1982) will serve as a basis for developing general guidelines by which appropriate review authorities may study and further analyze projects. Again, the space per student ratios are comparative indicators; they do not provide formula-driven facilities plans, but rather point out areas which deserve further questioning and analysis. In the 1984 Plan, the Regents will review the data for the overall implications and trends they may reveal. If inefficient use of statewide resources in a particular area is seen, the Regents may offer guidance in that area of facilities planning.

Of course, the main reason that we are concerned with facilities is that they cost money—money to design, buy, build, maintain, and operate. During 1979-80, over one-half billion dollars, or 9.4 percent of the total Current Fund expenditures for New York institutions, went toward maintenance and operation of plant. Nearly a third of a billion dollars was spent on debt service for non-residential facilties. The tables presented in this Progress Report display amounts of space but do not tell anything about the costs of those facilities; obviously it is important to track not only excess space but also cost indicators for higher education facilities. The Department will also prepare for the 1984 Plan a series of indicators which explore two categories of facilities costs and their impact on institutions. First, the burden of debt service will be examined, its cost per square foot, and per student at comparable institutions, and perhaps its impact on tuition levels. Second, maintenance and operation of plant, an area affected by many influences, including energy and labor costs as well as general and regional economic conditions, will be studied to develop some baseline data. The Regents expect these data will be of use in assessing future institutional plans for new facilities or renovation/rehabilitation of existing space, provided data problems can be overcome. Comparative ratios, such as maintenance and operation costs per student could be used by schools as indicators of their own institutional conditions. A major operations and maintenance data problem still to be addressed is the fact that cost data is available only for operation and maintenance of Educational and General functions, which excludes such functions as auxiliary enterprises (e.g. dormitories), hospitals, and independent operations. No operations and maintenance data are reported separately for these latter functions.

The Department has collected considerable institutional facilities data from the Federal Higher Education General Information Survey (HEGIS) inventory of college and university physical facilities. The last call from the Federal government for facilities information was in 1974. In 1979 the Education Department again collected facilities data, using the format of the 1974 collection instrument, but the data were not collected at the Federal level. The Department does not foresee a Federal (HEGIS) facilities data request in the near future. The fall 1982 HEDS survey will call for facilities and "student credit hours/enrollment by time of day" data in formats similar to those used in previous years. Both reporting instruments for these data will be updated to provide meaningful data for analysis purposes, and in the process the formats will be simplified to ease institutional reporting burdens. A major change in the facilities section will for the first time allow the Department to report on condition of the buildings inventory by ownership, that is, what proportion of the inventory of buildings is owned (or under amortization), leased, or shared. This is an important consideration in discussions of deferred maintenance levels. In addition, institutionally owned or leased housing will be surveyed and, again for the first time in New York, data will be available regarding design and actual occupancy rates according to ownership. The data will allow a measure of what flexibility exists across the State in housing facilities.

The HEDS facilities reporting instrument will also call for student credit hours taught by time of day. Main and branch campuses will report credit hour, as well as facilities data, separate from one another. This will allow development of more accurate comparative indicators of room use by FTED students than are currently available.

In addition to the basic HEDS data request already outlined, the Bulletin will call for institutional plans, based on certain expectations of future conditions. Schools, projecting enrollments, will forecast facility needs for their campuses. The comparative indicators presented will be used to guide institutions toward areas of over and under-utilization on their campuses. Plans for new facilities or renovations should be made in the context of both anticipated enrollments and comparative indicators. Any plans for additional capital facilities should be justified according to fiscal, programmatic, physical, and market considerations.

Addendum

Table 23

Facilities and FTED data from some institutions were excluded from Table 23 for one of two reasons. A few schools did not submit facilities or enrollment data suitable for use in the analysis. Other institutions were excluded in the interest of comparability of data.

Institutions Excluded

Onondaga Community College
SUNY Downstate Medical Center
SUNY Upstate Medical Center
SUNY at Buffalo Health Science Center
SUNY at Stony Brook Health Science Center

Empire State College

Albany College of Pharmacy
Albany Medical College
Cornell University Medical College
Mt. Sinai School of Medicine
N.Y. Chiropractic College
N.Y. College of Podiatric Medicine
N.Y. Medical College

All Seminaries (18)

All Nursing Schools (6)

Albany Law School
Bank Street College of Education
Brooklyn Law School
College for Human Services
College of Insurance
Friends World College
Juilliard School
Manhattan School of Music
N.Y. Law School
N.Y. School of Interior Design
Parsons School of Design
Rockefeller University
Teachers College
Webb Institute of Naval Architecture

Columbia University
Rensselaer Polytechnic Institute
Cornell University

Adelphi Business School of Mineola
Central City Business Institute

Fiscal Resources

The 1980 Statewide Plan's fourth goal, the "Effective Use of Resources," included an objective related to the fiscal resources necessary to maintain an effective postsecondary system into the 1990's. These fiscal resources include student aid and both capital and operating institutional aid. Anticipating enrollment declines, the objective stated that the amount of State expenditures for higher education, adjusted for inflation, will be less in 1990 than in 1980, but that the decrease in State expenditures would not be proportionately as large as the enrollment decline. In the short term, the objective recognized the inability of institutions to react immediately to reductions in enrollment by proportionate decreases in operating costs. In the long-term, the objective recognized the existence of fixed costs which do not vary with enrollment. Related to this objective, the Plan also proposed that a portion of the dollar value of State cost reductions which would otherwise accrue to the State from the effects of enrollment decline on institutional and student aid programs be directed back to postsecondary education through the annual budget process to support improvements and new initiatives. Under this activity, appropriate long-term reductions related to enrollment decline would be made and the "reinvestment" of a portion of these savings would entail no guarantee that it would be in the institution, sector, or even program that generated the savings. For example, a portion of the savings generated in institutional aid programs might, if warranted, be used to enrich student aid.

The Governor did not approve the objective proposed in the 1980 Plan. He stated, however, that his objection was not to short-range, less than proportionate reductions in State aid, but rather to long-term promises of "protection" to institutions. In fact, the Governor cited his recent support of changes in the community college aid formula and other actions to ensure that those institutions would not be unduly penalized by sudden decreases in enrollment.

The Regents agree with the Governor in that they also do not support long-term "protection" against appropriate budget reductions which result from enrollment declines. However, merely acknowledging the need for such reductions does not provide an adequate framework for fiscal planning. It was for the purpose of establishing some generally accepted fiscal boundaries for responsible planning that the 1980 Plan proposals were made. In the absence of agreement on fiscal boundaries, the Regents propose to redirect fiscal planning to other elements in the planning statute.

In relation to fiscal resources, section 237 of the Education Law specifies that master planning should identify the resources required to meet the goals of the plan, be sufficient in detail to enable the evaluation of the costs of higher education, and optimize the use of resources. To fulfill the intent of this section, both retrospective and prospective examination of the levels and allocation of fiscal resources are needed. Basically, this translates into the presentation and analysis of revenue and expenditure data. It also suggests the review of these data at many levels, e.g., statewide, by sector, and by type of institution. In addition, the source of revenues must be examined, comparing revenues from tuition and fees, the State, and the Federal government. Within revenue categories it may be necessary to determine the influence of specific programs, such as the proportion of tuition revenue paid by the Tuition Assistance Program. On the expenditures side, it is critical to know how institutions spend their funds, by activity. Finally, to gauge the optimal use of resources, unit cost data, usually per student, is essential. Whether it is to gauge retrospectively the effects of program changes or to assess the effects of proposed changes, a wide array of such fiscal data is needed.

Initial efforts in this direction have been devoted to explaining the extent to which available and regularly collected information lends itself to this end. The data displays in this section are preliminary and partial and are provided only to indicate the direction of fiscal planning for the 1984 Plan. Much work is needed to refine the data and, most importantly, to determine the most relevant method of presentation.

Data used for analysis come from the Department's Higher Education Data System (HEDS) which is based primarily on the Federal Higher Education General Information Survey (HEGIS). This annual survey is the only source of comparable institutional data.

Revenues

The major sources of revenue for New York State colleges and universities in 1975 and 1980 are shown in Table 24. The amounts have not been adjusted for inflation. Tuition and Required Fees continues to be the largest source of revenue, statewide, with State Appropriations second, and Federal Grants and Contracts third. The table clearly reflects the imposition of tuition in 1976 and the shift from City to State funding over the years for The City University of New York. It also shows increasing reliance on tuition and fees at independent institutions and a decreasing reliance on them at the State University.

Despite the shift toward State funding at the City University, the relative contribution of the State of New York to funding all higher education declined slightly over the years 1975-80. However, this table reflects only State funds as they flowed directly to institutions. Thus, funds for the Tuition Assistance Program (TAP) are not shown as State funds, but subsumed in the Tuition and Fee category. When TAP funds are included with the State funds flowing through institutional aid programs, the overall State share of funding shows an increase, from 26.2 to 27.9 percent. This indicates a shift in the emphasis of State programs from institutional to student aid. Even more dramatic is the shift when student aid from all sources — State, Federal and institutional — is considered. In 1975 total student aid represented 13.4 percent of all institutional revenue, while in 1980 such aid represented 22.1 percent.

State Appropriations

Because of the central role of the State of New York in funding higher education, it is important to look at changes in State funding that have taken place in recent years. Table 25 provides basic information on State appropriations to higher education for operating programs in recent years. Table 26 shows the same appropriations allocated to five major recipient groups from 1972 to 1982, as well as the percentage change in the allocations from 1976 to 1982, adjusted for inflation. A shift away from institutional support and toward student aid is very evident in these figures and is reinforced by a sharp increase in Federal student aid in the same period. This is attributable primarily to the enrichment of the Tuition Assistance Program that took place in the late 1970's. Table 27 shows the same major recipients of State funds with student aid distributed among the institutional sectors attended by the aid recipients.

Related to total State revenue, the proportion of total State appropriations allocated to higher education has remained between 12 and 13 percent in recent years.

Expenditures

Colleges and universities in New York State spent almost $5.4 billion on current operations (excluding capital construction) in 1979-80. This aggregate figure, although it is important for understanding the fiscal context of higher education in the State, is not sufficient to answer the more detailed questions of interest to planners and policymakers:

Table 24
SHARE OF REVENUE FROM EACH REVENUE
SOURCE OF NEW YORK STATE INSTITUTIONS

By Sector, Academic 1975 & 1980

	NYS		SUNY		CUNY		INDEPENDENT		PROPRIETARY	
	1975	1980	1975	1980	1975	1980	1975	1980	1975	1980
Tuition & Fees	26.3	30.4	16.4	14.6	9.4	24.9	36.6	39.7	88.6	89.5
Federal Appropriations	1.1	0.5	0.9	0.5	0.9	0.5	1.4	0.5	0.0	0
State Appropriations	24.1	23.5	52.6	54.1	38.1	43.3	3.6	2.6	0.3	0
Local Appropriations	8.6	3.7	5.3	5.0	43.1	19.3	0.0	0	0.0	0
Federal Grants & Contracts	10.5	12.1	6.4	7.1	4.7	7.2	14.7	16.1	0.5	0
State Grants & Contracts	1.2	1.1	2.0	1.5	0.5	1.5	0.9	0.7	0.5	0
Local Grants & Contracts	2.3	2.2	1.0	0.4	1.3	0.4	3.4	3.6	0.0	0
Private Gifts & Contracts	5.5	5.7	2.5	2.6	0.8	1.9	8.7	8.3	0.0	0
Endowment Income	2.9	3.4	0.2	0.2	0.2	0.2	5.2	5.9	0.0	0
Educational Activities	0.6	0.9	0.4	0.6	0.0	0.4	0.8	1.2	0.1	0.3
Auxiliary Enterprises	7.5	7.2	6.6	5.8	0.7	0.2	10.1	9.4	4.7	4.0
Hospitals	6.6	5.5	3.6	4.2	0.0	0	10.5	7.3	0.0	0
Other Sources	2.6	3.1	2.2	3.3	0.2	0.4	3.6	3.4	5.3	6.1
Independent Operations	0.3	0.8	0.0	0	0.0	0	0.5	1.3	0.0	0.1
Total Percent	100	100	100	100	100	100	100	100	100	100
Total $ Millions	$3,708.3	$5,465.1	$1,156.0	$1,755.5	$607.6	$587.2	$1,996.7	$3,085.5	$19.9	$ 34.7
Percent Unrestricted	82.9	81.3	88.1	88.2	93.0	89.3	76.6	75.6	99.1	100.0

Source: NYSED, Office of Postsecondary Research, Information Systems and Institutional Aid, 1982

Table 25

STATE APPROPRIATIONS FOR POSTSECONDARY EDUCATION OPERATING PURPOSES
(in $ millions)

	1975-76		1976-77		1977-78		1978-79		1979-80		Change 1975-76 to 1979-80	
	amount	percent	amount	percent	amount	percent	amount	percent	amount	percent	amount	percent
State University of New York[1,2]	$ 667.4	54.3	$ 636.7	50.0	$ 688.3	50.6	$ 787.8	51.7	$ 818.4	51.3	$ 151.0	22.6
City University of New York[2]	140.4	11.4	130.8	10.3	129.8	9.6	168.9	10.9	177.3	11.1	36.9	26.3
Community College (SUNY & CUNY)[3]	148.0	12.0	156.0	12.2	157.0	11.5	164.2	10.8	171.0	10.7	23.0	15.5
Aid to Independent Institutions												
Bundy Aid	57.4	4.7	62.7	4.9	66.6	4.9	68.0	4.5	68.0	4.3	10.6	18.5
Health Professions	19.0	1.5	16.1	1.3	14.1	1.0	16.6	1.1	13.8	0.9	(5.2)	(27.4)
Special Grants[4]	.8	0.1	0	-	2.6	0.2	1.8	0.1	2.5	0.1	1.7	212.5
Student Aid												
TAP	103.5	8.4	184.2	14.5	214.6	15.8	238.2	15.6	253.6	15.9	150.1	145.0
All Other	29.5	2.4	25.7	1.9	23.9	1.8	21.5	1.4	31.1	2.0	1.6	5.4
Programs for the Disadvantaged	44.2	3.6	39.0	3.1	36.4	2.7	36.9	2.4	38.1	2.4	(6.1)	(13.8)
Other NYSED	7.9	0.6	8.0	0.6	9.9	0.7	10.0	0.7	9.5	0.6	1.6	20.3
Other SUNY	2.2	0.2	2.1	0.2	3.4	0.2	2.9	0.2	3.6	0.2	1.4	63.6
Other State Agencies	9.4	0.8	12.8	1.0	13.7	1.0	9.6	0.6	7.6	0.5	(1.8)	(19.2)
TOTAL APPROPRIATION	$ 1,229.7	100.0	$ 1,274.1	100.0	$ 1,360.3	100.0	$ 1,524.4	100.0	$ 1,594.5	100.0	$ 364.8	29.7
State Revenues	$ 9,784.4		$ 10,801.4		$ 10,895.8		$ 11,555.1		$ 12,765.2[5]		$2,980.8	30.5
Total Higher Education Current Fund Expenditure (from all sources)	$ 4,033.4		$ 4,208.8		$ 4,477.3		$ 4,994.1		$ 5,358.8		$1,325.4	32.9
Total Approp. % of State Rev.	12.6		11.8		12.5		13.2		12.5			
Total Approp. %of Total Exp.	30.5		30.3		30.4		30.5		31.6			

[1] Regular Operations Adjusted, including employee fringe benefits

[2] Excludes Community Colleges

[3] Includes both SUNY and CUNY Community Colleges

[4] Einstein Schweitzer Chairs, Education of Native Americans, Vermont/Sackler Medical Contracts, Regional College Cooperative Service Boards

[5] Excluded in 1979-80 is $530.6 million of Mental Hygiene-Related Revenue, included as State revenue for the first time in 1979-80

Source: NYSED: Office of Postsecondary Research, Information Systems and Institutional Aid, 1982

Table 26

SHARE OF NEW YORK STATE
HIGHER EDUCATION APPROPRIATIONS
By Recipient, 1975-76 to 1981-82

Recipient	1972	1976	1977	1978	1979	1980	1981	1982	Constant $ Percent Change 1976 to 1982*
Public Institutions	78.9%	77.7%	72.5%	71.7%	73.4%	73.1%	74.9%	76.7%	- 7.9%
Independent Institutions	5.2	6.3	6.2	6.1	5.7	5.3	5.4	6.0	-10.6%
Student Aid	9.1	10.8	16.4	17.6	17.0	17.9	16.3	16.5	42.5%**
Programs For Disadvantaged	5.3	3.6	3.1	2.7	2.4	2.4	2.3	2.3	-39.7%
Central Agencies	1.5	1.6	1.8	1.9	1.5	1.3	1.2	1.2	-30.3
Total	100%	100%	100%	100%	100%	100%	100%	100%	

*Inflation rates of 10 & 8 percent were assumed for 1981 and 1982.

**Most of this change occurred in 1977.

Source: NYSED, Office of Postsecondary Research, Information Systems and Institutional Aid, 1982.

Table 27

SHARES OF NEW YORK STATE
HIGHER EDUCATION APPROPRIATIONS AND
STUDENT AID, 1975 AND 1980

	1975	1980
Public Institutions		
Institutional Aid	78.9%	73.1%
Student Aid	3.9	8.0
Programs for Disadvantaged	4.1	1.6
Total	86.9%	82.7%
Independent Institutions		
Institutional Aid	5.2%	5.3%
Student Aid	5.2	9.9
Programs for Disadvantaged	1.2	0.8
Total	11.6%	16.0%
Central Agencies	1.5%	1.3%
GRAND TOTAL OF STATE FUNDS	100.0%	100.0%

Source: NYSED, Office of Finance and Facilities, 1982.

- Are expenditures following enrollment levels?
- Are there major differences among the institutional sectors?
- Have there been major shifts in expenditure patterns in recent years?

The brief discussion that follows provides summary statistics that bear on these and other important contextual questions.

Table 28 shows total current funds expenditures in higher education in New York State for the past five years. Excluded from current funds expenditures are transactions related to other fund accounts (e.g., endowment, capital construction). Expenditure figures are shown on a per Full-Time Equivalent Student (FTES) basis.* In addition, adjustments have been made for inflation.** These two adjustments are the most important ones for creating comparable financial statistics. One could consider other adjustments as well (e.g., for student characteristics or program mix), but data would be almost impossible to obtain.

Table 28 shows that per student expenditures, when adjusted for inflation, are at about the same level in 1980 as they were in 1975, but also reflects a 4 percent decrease from 1979 to 1980. This aggregate statistic includes many factors (e.g., research expenditures) and therefore should be used cautiously. The observed results may reflect reductions in research expenditures, increased efficiency, faster expansion of lower-cost programs, or a variety of other factors. In any event, this small decrease would be disguised if only the expenditures per student unadjusted for inflation were examined; the unadjusted data show an increase of 33 percent in per student expenditures. Obviously both these types of data are important and much work needs to be done for the 1984 Plan in presentation and analysis of such data. Sub-components of cost, and the forces driving them are important. For example, it must be noted that the cost of collective bargaining agreements is a significant factor. In the public sectors the institutions do not negotiate agreements on their own behalf, and it is possible that the terms of such agreements drive, to some extent, compensation and thus costs in the independent sector. These types of data provide a starting point for further analysis in future planning documents rather than a basis for immediate judgement.

Unit Cost Indicators

Unit cost indicators do not provide answers by themselves, but are gauges by which we measure the fiscal effects of public policy decisions on issues such as the balance of the sectors, institutional aid as compared to student aid, and various formula funding programs. The Regents plan to report trends in cost indicators for groups of similar institutions on a periodic basis, in the Progress Report and Statewide Plan. Individual institutions may wish to relate these statewide indicators to their own situations. This Progress Report presents preliminary work in the area of cost indicators in Table 29.

The cost indicators, even when developed well beyond their current state, are and will be only indicators. There will be few, if any, cases where standards or norms exist, or can be developed, to permit judgements based on the indicators alone. "High" or "low" indicators do not indicate "acceptable" or "unacceptable" expenditure levels. Rather, the cost indicators, and especially trends in the indicators over time, will serve as pointers for institutional managers and State decision-makers to direct further examination.

Exact comparability of data among institutions is a problem because of the diverse nature of institutions as well as some non-discrete aspects of available data. One such problem is that HEGIS-reported expenditures are aggregate expenditures, not broken down by program level. Thus, costs for graduate students, undergraduates, and non-degree

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*In this discussion FTES = Headcount full-time enrollment, plus 0.33 x Headcount part-time undergraduate enrollment, plus 0.40 x Headcount part-time graduate and first-professional enrollment.

**The inflation adjustments are based on the Higher Education Price Index (HEPI) developed by Halstead.

Table 28

Total Current Funds Expenditures in Higher Education
In New York State, 1975-76 to 1979-80

	Current Funds Expenditures (Current $ Millions) A	Current Funds Expenditures (1979-80 $ Millions) B	Full-Time Equivalent Students C	Current Funds Expend. Per FTE Student (Current $) D = A/C	Current Funds Expend. Per FTE Student (1979-80 $) E = B/C	Higher Educatic Price Index* F
1975-76	$4,033	$5,442	748,700	$5,387	$7,269	
1976-77	4,210	5,316	721,100	5,838	7,372	
1977-78	4,477	5,300	724,600	6,179	7,315	
1978-79	4,994	5,487	721,700	6,920	7,602	
1979-80	5,359	5,359	734,200	7,298	7,298	

NYSED, Office of Postsecondary Research, Information System and Institutional Aid, 1982

* Halstead, Kent. Higher Education Prices & Price Indexes. USDHEW. U.S. Government Printing Office, Washington, D.C. 1975 and 1978.

Table 29

STUDENT RELATED EDUCATIONAL AND GENERAL COSTS
PER FULL-TIME EQUIVALENT STUDENT
1976-77 through 1980-81

	SUNY		CUNY				
	Community Colleges	All Other	Community Colleges	All Other	Independent	Proprietary	All
1980-81	$2,915	$4,729	$3,694	$4,374	$4,950	$2,474	$4,391
1979-80	2,802	4,840	3,012	3,603	4,941	2,152	4,229
1978-79	2,655	4,425	2,711	3,400	4,509	1,315	3,880
1977-78	2,446	4,075	2,367	3,104	4,130	1,590	3,551
1976-77	2,316	3,737	2,513	3,018	3,812	1,728	3,333

NOTE: "Student Related Education and General Costs" are equal to the sum of instruction, student service, and a proportion of academic support, institutional support, and educational and general operation and main-maintenance. The proportion is defined to be instruction costs divided by the sum of instruction plus organized research plus public service costs.

Source: NYSED, Office of Finance and Facilities, 1982.

students are commingled. Precise comparative analysis is also made difficult by the lack of mutually agreed upon accounting of full-time equivalent students (FTES). Program mix is yet another condition which militates against exact comparability; never will we find two institutions identical in program mix. Increased effort on the part of all is needed to examine and reduce the impact of these data problems.

The ratios presented in this Progress Report address recent trends within the Educational and General (E+G) expenditures function of Current Funds Expenditures; some relationships are suggested for further exploration. The largest part of almost every college's Current Funds Expenditures is its Educational and General expenditures. Most institutional activities other than residence-related activities are funded by E+G expenditures. The following analysis examines only "student related expenditures" within the E+G function. Public Service, Organized Reserch, Mandatory Transfers, and Scholarships and Fellowships are excluded from Student Related E+G expenditures. Also excluded are those portions of academic support, institutional support, and operation and maintenance of plant which can be attributed to institutional research and public service (i.e., non-student related expenditures). By no means is this measure intended as the only one of importance. The Regents welcome observations from the higher education community concerning the measurements selected and suggestions for further development of this work.

The use of any ratio analysis must, as already noted, be somewhat judicious in regard to comparisons among institutions. The measurements are useful, however, to analyze trends. For this reason, the Progress Report presents measurements for the past five years. In Table 29, Student Related Educational and General expenditures per student are shown by sector and institutional type. The enrollment used is full-time equivalent students (FTES), as defined above.

The figures displayed in Table 29 are highly aggregated statistics which encompass a wide variety of different expenditures, programs, and students. It is not possible to break out these figures into more detailed components without a set of elaborate campus-level cost studies. Nor is it possible to provide clear-cut explanations for the variations evident both within and between sectors. In addition, the database used to construct Table 29 is composed of HEDS/HEGIS fiscal data reports which institutions submit yearly. Up to now, the database has not been extensively used to examine student-related expenditures per FTES and may reveal certain irregularities. The Department intends to continue work in this fiscal indicator area; the use of aggregated institutional data highlights the need for accurate and timely institutional data submission.

Table 29 shows that the average Student Related Expenditures per FTES (SRE per FTES) at all of New York's postsecondary schools went from $3,333 (1977) to $4,391 in 1981 — a 32 percent increase. This is in contrast to the 49 percent increase in the Consumer Price Index over the same period. The largest proportional increase over the five year period occurred in the CUNY community colleges, with a 48 percent increase in SRE per FTES. The smallest increase was 26 percent at SUNY community colleges. The CUNY sector showed the largest proportionate increases in all four sectors — 45 percent at the non-community colleges and, as already noted, 48 percent at the CUNY community colleges. SUNY had the smallest percentage increase in expenditures — 26 percent at community colleges and 28 percent at all other SUNY units. The Independent sector was slightly above SUNY with a 30 percent increase in SRE per FTES over five years. Proprietary schools, which show the lowest dollar amount of expenditures, experienced the second highest proportionate increase. Their expenditures rose 43 percent, from $1,728 per FTES in 1977 to $2,474 in 1981. The three highest expenditures per FTES in 1981 were at: 1) SUNY State-operated campuses, 2) CUNY "All Other", and 3) Independent institutions. SUNY had SRE per FTES of $4,779; the Independent schools were 3.6 percent higher, and CUNY institutions were 8.5 percent lower, than the SUNY figures.

Inevitably, Table 29 suggests that these data be used for comparative purposes, both among sectors and at the institutional level. There are a variety of factors that can affect individual variations from the average table figures. Some of these differences may be due to:

1. programs that are inherently more costly, e.g. hard sciences, fine and performing arts;

2. high quality programs requiring more resources;

3. inefficiency;

4. differences in cost due to location;

5. variations in the use of resources, e.g. rental of facilities rather than ownership, oil rather than gas heat; and

6. inaccuracy in reporting.

The point to remember, however, is that Student Related Expenditures per FTES are indicators, and as such are useful only in conjunction with other statistics and trends. They only point out areas that deserve closer scrutiny, either as potential trouble spots or possible examples of effective practices.

Educational and General costs by themselves do not tell much about causes of the overall change. For that we must examine trends in the functional components (and sub-components) of the E+G expenditures area. In the future, the Department will examine the individual components of E+G expenditures, comprising the costs of instruction (including student/faculty ratios), academic support (including a separate examination of libraries), student services, and institutional support. The component cost indicators will be displayed in a fashion similar to that by which total E+G costs are displayed for this Progress Report. Other components of E+G expenditures are noted in the Facilities section of this Progress Report. Cost of operation and maintenance of plant, and E+G mandatory transfers (i.e. debt service) as indicators of fiscal performance are planned for inclusion in the facilities section of the 1984 Statewide Plan.

Certain caveats must be considered when evaluating the measures presented in this report due to the nature of the database and method of aggregation. For example, there are problems of comparability between institutions offering programs of different costs, as between four-year liberal arts colleges and universities which maintain expensive graduate or research programs. The measures chosen for display in this Progress Report are only illustrative. They are not comprehensive and are subject to critique and further refinement. The measures are presented in aggregates rather than attempt at the outset for detailed levels of institutional typology. Between now and the 1984 Statewide Plan more detailed data and indicators will be developed, particularly to differentiate among institutional types.

Cost Effectiveness of Institutional Operation

In support of the goal of Effective Use of Resources, all institutions were asked to address the issue of cost effectiveness in the operation of colleges and universities. The sectors were asked to describe efforts postsecondary institutions were making to increase their cost effectiveness so that ideas could be shared with the higher education community.

State University of New York stated that the introduction of its Multiphase Rolling Plan has done much to strengthen planning for the system as a whole and consequently has done much to strengthen the cost effectiveness of the SUNY system. The Multiphase Rolling Plan combines planning and budgeting. Campuses examine priorities in relationship to system priorities and explore alternatives for internal change, for inter-campus trades and affiliations, and for possible mission changes. The Multiphase Rolling Plan has better integrated the capital and operating plans and budgets of the campuses. It has permitted SUNY central administrative staff to perform more comprehensive analysis of campus plans and budgets, using system-wide comparisons.

State University of New York said that it seeks to eliminate regulations which needlessly inhibit flexibility, with a view toward reducing costs of State operations. The University stated that it has continued to discuss with the Education Department the impact on its campuses of regulations relating to branch campuses and extension centers and to the ratio of full-time to part-time faculty.

State University stated that it will continue to reduce energy costs through cost effectiveness measures; steps taken include: establishment of mandatory guidelines for operations of systems, setting of illumination levels, installation of automated energy management systems at 13 campuses, mechanical and electrical system retrofits and other energy conservation projects, and provision of monetary incentives to campuses meeting standards. The University plans to install automated energy management systems at the remaining campuses within the next two years. Since 1973, the University's total energy consumption was reduced by 24 percent, producing a total cost savings of $103.8 million.

The City University of New York stated in its progress report that a major initiative to improve cost effectiveness has been the development of an academic planning process, involving all of the colleges in the system and the central office of City University. According to the University, since the funding of the University is in large measure driven by student enrollment, the enrollment declines in several colleges over the past few years have led to proposed curtailment by State budget authorities. The academic planning process was triggered by budget prospects which fell short of University needs in 1980. It is designed to review the size and distribution of resources —especially faculty resources — in relation to changing patterns of student enrollment and curricular demand, and project optimal resource allocation for the future. According to CUNY, the academic planning process provides an opportunity for the University to review and evaluate its academic curriculum.

In order to expand secondary interests of faculty in disciplines for which student demand has diminished, CUNY has instituted a faculty development program. The program is targeted to three disciplines where demand for faculty is high: computer science, data processing, and writing. In the pilot phase of the program, some 30 faculty participated in specially designed intensive courses, preparing for fall 1982 assignment in new areas.

City University stated that, over the past two years, significant cost savings have been experienced due to energy conservation measures. CUNY has installed computerized systems in all its facilities to monitor heating and cooling, and during the summer of 1981, the University moved to an extended-day, four-day week, and achieved substantial savings in air conditioning costs. CUNY reports that it has implemented a number of other programs to decrease expenditures related to facilities and equipment, including: reduction of leased facilities to diminish long-term rental costs, purchase of telephone equipment for several colleges at considerable savings over the long run, and implementation of a comprehensive capital maintenance program to minimize costly major repairs.

The City University of New York has prepared a proposal, not yet approved, for the creation of an inventory of scientific and other equipment, to enable more effective use of these expensive resources among its colleges. CUNY continues to explore such options as the joint purchase of supplies and library materials and the publication of a core catalog for all the colleges in the system. A long-range goal is the development of a new financial information system designed to improve cost analysis.

In its consolidated progress report for the independent sector, the Commission on Independent Colleges and Universities identified a number of strategies that independent institutions have employed for cost effectiveness.

- One college has established a daily cash flow analysis that allows it to minimize the funds in checking accounts and maximize the fund in high-yield accounts.

- A consortium acts as purchasing agent to secure low prices through volume purchases.

- A college computes average teaching load for the academic year, rather than paying faculty for overload teaching at semester's end.

- An academic dean compiles a profile of each academic department, detailing the department's budget, number of majors, student credit hours, and cost per student. Cost-effective departments are easily discernible.

- A college offers faculty from non-growth areas individually tailored retirement options.

- A college has achieved efficiencies by centralizing major support service areas of the college; a secretarial service center, computer center, energy management center, and executive space committee (which reviews facility plans) have been established.

The Commission asked that the Regents establish, in preparation for the 1984 Statewide Plan, a task force to study the State financing of higher education. CICU suggested that the task force should:

(1) identify factors which increase institutional expenditures, such as labor costs, energy costs, and general price inflation;

(2) project how each of the above factors will impact institutions, sectors, and The University of the State of New York;

(3) evaluate expected resources, including an analysis of how tuition levels affect student choice, the cost versus the benefit of student financial aid, level of student aid required to meet the Regents goal of Access, and level of total State support required to ensure a quality system of higher education.

Chapter 4

PROGRESS IN OTHER AREAS OF CONCERN

Secondary/postsecondary articulation

Under the goal of Access, the 1980 Plan included the following objective related to articulation between educational levels:

> By 1982 the Regents will have advanced the program to strengthen articulation between elementary/secondary and postsecondary education. Specific information on established relationships between the colleges and universities and the elementary and secondary school systems will be gathered through the 1982 progress reports.

In 1974 the Regents issued a policy statement (Position Paper No. 21) calling for improved policies and practices in the articulation of secondary/postsecondary education, in service of the goals of (1) matching each individual's needs, talents, and aspirations with the most appropriate educational resources to meet them; (2) providing comprehensive educational opportunities to learners of all ages; (3) eliminating unnecessary duplication and discontinuities in the educational system; and (4) maintaining and strengthening quality in all aspects of education. The position paper made 23 recommendations to improve articulation, ranged under six major headings: guidance and career information, curriculum organization and content, admission and transfer policies, competency and achievement testing, sharing faculty and resources, and occupational and continuing education. In the 1976 Statewide Plan the Regents reiterated their interest in articulation efforts, especially to reduce the overlap in curricula between high schools and colleges, to provide more opportunities for advanced work for able high school seniors, and to promote cooperation between the two levels of educational institutions in remediating learning deficiencies of college-age and adult students. The Regents 1978 Progress Report on the 1976 Statewide Plan described progress toward the first two of these objectives but did not treat remediation efforts at length. Improved articulation between postsecondary and secondary education can probably reduce somewhat the overall need for post-high school remediation. Remediation is discussed at greater length elsewhere in this Progress Report.

The most extensive sector report on articulation between postsecondary and elementary/secondary education in New York is City University's "Articulation with Elementary and Secondary Schools, 1980-81," issued in January 1982. According to this report, in 1980-81 all CUNY units except one (Baruch College) were involved in one or more of 123 articulation projects with over 350 schools or school districts. The projects fell into the following categories: Counseling (24); Basic Skills (4); College Credit (22); Gifted and Talented (2); Mathematics and Science (25); Programs to Reduce the Dropout Rate (4); Special Programs (13); and Teacher Training (34). Eighty of the projects were funded fully or substantially by outside sources.

The Commission on Independent Colleges and Universities (CICU), in its 1982 Progress Report, stated that there were formal and informal articulation arrangements with high schools and two-year colleges at almost all of the 70 independent institutions which had submitted progress reports as of May 1982. Some institutions reported participation in special articulation advisory groups, including local school boards and other colleges. Most institutions gave local high school students the opportunity to take courses on their campuses prior to graduation.

State University reported that all of its community colleges now have approved Full Opportunity Programs guaranteeing admission to a suitable program to every high school graduate in their sponsorship areas. The Educational Opportunity Program of State University provides special assistance to students whose educational and economic circumstances have limited their postsecondary educational opportunities. The services of this program include eight Educational Opportunity Centers and an outreach program in connection with a community college, all located in or near urban areas, which provide college preparatory, basic education, and vocational learning experiences for adults who have not earned a high school diploma or its equivalent.

Community colleges of State University participate in cooperative arrangements with Boards of Cooperative Educational Services (BOCES). Such arrangements range from Joint Occupational Advisory Councils to shared use of classrooms, laboratories, and shop facilities. Participating institutions include Genesee Community College/Genesee-Wyoming BOCES; Westchester Community College/Northern Westchester-Putnam County BOCES; Cayuga Community College/Cayuga-Onondaga BOCES; Adirondack Community College/Washington, Warren, Hamilton, and Essex BOCES; Fulton-Montgomery Community College/Fulton-Montgomery and Hamilton County BOCES; Jamestown Community College/Chautauqua County BOCES.

Articulation between elementary/secondary and postsecondary education has yet another aspect: the education of future teachers in college and university education programs. Declining enrollments in these programs have recently seemed to point to a dramatic reversal of the oversupply of teachers caused by the lower birth rates of the 1960's. From 1975 to 1979, the number of persons completing registered teacher certification programs in New York State declined by 44.4 percent and the number certified by individual evaluation declined by 40.1 percent. Certification areas in which major declines have occurred are: mathematics, 69.1 percent; social studies, 69.0 percent; French, 65.9 percent; English, 63.8 percent; Spanish, 56.9 percent; chemistry, 54.3 percent; art, 53.3 percent; and physics, 50.0 percent. Between 1975 and 1979, the public school employment rate of newly certified graduates of registered programs increased from 10.3 percent to 13.5 percent. School districts responding to a 1981 State Education Department survey reported not only quantitative, but also qualitative problems in recruiting new teaching personnel. In the coming years, new and creative approaches will be needed to address the problems of attracting able students to prepare for teaching careers, updating and improving the curricula of elementary and secondary education programs in colleges and universities, redefining the credentialing of prospective teachers, and in-service training for experienced teachers. Bills addressing various aspects of these problems were included in the Regents 1982 Legislative Program and are expected to be included in the 1983 Program.

Higher Education and Economic Development

The Regents 1980 Statewide Plan, like its predecessors, recognized Service (along with Teaching and The Extension and Preservation of Knowledge) as one of the intertwined parts of the mission of postsecondary education:

> New York colleges and universities must serve our communities, State, and Nation. They must train and retrain workers and professionals to keep them abreast of changing technologies in the workplace and the advance of knowledge in professional fields. Higher education must apply its research capacities to the social and technological problems of our communities and our society and to the economic redevelopment of New York State and the Nation.

In the intervening months, New York's postsecondary education community has been focusing attention on defining and fostering its relationship to the economic development of the State. Initiatives in this direction have come from individual institutions, from the sectors of higher education, and from State government. The Regents included in their 1982 legislative program two proposals designed to aid higher education in its efforts to become more effectively involved with economic development in high-technology areas: (1) Research Equipment Acquisition Grants, matching grants awarded on a competitive basis to colleges and universities; and (2) the establishment of Centers for Advanced Technology, each operating within a designated technological field selected in consultation with the New York State Science and Technology Foundation and the State's scientific, engineering, business, and industrial communities. The Governor, in his 1982 economic message to the Legislature, called for the establishment of similar "Centers of Excellence" at a number of universities throughout the State.

As a result of these and other efforts, in July 1982 a statute was enacted and signed into law which authorizes the Science and Technology Foundation to designate and support Centers for Advanced Technology, each operating within a technological field identified by the Foundation as economically promising. Each Center will be operated by a university or a consortium, and will be charged with conducting a continuing program of research, development, and technology transfer in its technological field, in collaboration with industry. Centers will be funded by the State, with at least matching funds from other governmental sources and industry. A similar center, the Center for Industrial Innovation at Rensselaer Polytechnic Institute, received legislative authorization for partial funding by the State in March 1982.

To explore the most fruitful paths for high technology development in New York State, the Science and Technology Foundation commissioned Battelle Columbus Laboratories to conduct a study leading to recommendations for State stimulation of high-technology industry (which now accounts for approximately 10 percent of all employment in New York, half of the total industrial employment). The study, released in May 1982, recommended that the State concentrate resources, support, and incentives on two broad groups of technologies with high potential for growth: electronics/information and medical/biological. High-technology industries depend heavily upon research and development, and upon educated personnel. The higher education community therefore has an important role to play in this strategy for economic development.

New York's highly educated workforce is one of its strongest assets. In their 1982 progress reports the State's colleges and universities describe a wide spectrum of programs designed to help industry meet its ongoing needs for employee education, training, and retraining. Programs at independent institutions include cooperative work-study/internship placement for students, on-site and on-campus courses tailored to a company's or labor organization's educational needs, and short-term seminars and workshops for varied clienteles. City University's new Center for Worker Education at City College now enrolls more than 200 students associated with labor unions in the City and anticipates steady growth in coming years. State University reports a marked increase in the delivery of education, research, and technical assistance programs and projects to communities and businesses, as well as increased availability of campus library resources. Export Assistance programs at SUNY campuses are assisting New York businesses with information and advice on developing foreign markets. In 1982 SUNY will have in place more than 20 Development Centers for Business across the State.

Many companies have well-established in-house training programs. For the employed adult, many institutions mentioned in their progress reports procedures for evaluating such non-collegiate experiences for college credit, employing guidelines established by the Regents Program on Noncollegiate Sponsored Instruction. Between January 1980 and June 1982, the Program evaluated 574 courses on behalf of 77 non-collegiate organizations for possible college credit. Since the Program began in 1974, it has evaluated courses for a total of 160 organizations, establishing college credit recommendations for 1,722 courses.

In order to provide additional State support for courses which community colleges provide by contract to business, industry, labor organizations, and the like, in 1981 a bill was enacted to amend Section 6304 of Education Law to permit students in contract courses to be counted by community colleges for the purpose of computing State aid. The intent of this legislation is to enhance the economic climate of a locality, and thus the State, by better meeting training needs of industry. As of March 1, 1982, SUNY community colleges had offered contract courses to 475 full-time equivalent students approved under this legislation; CUNY community colleges, to 990 approved full-time equivalent students. The legislation expires in 1984, unless extended by statute.

Engineering has come under particular scrutiny since 1980 because of the importance of engineers to New York industry, the recent high demand for their services and consequent rising undergraduate enrollments in engineering programs, combined with worsening difficulties for engineering schools in filling faculty vacancies and maintaining up-to-date laboratory equipment. In June 1982, the Regents issued a comprehensive study of engineering manpower and engineering education in New York State, with recommendations for action. Those recommendations included limited increases in the State's capacity for undergraduate engineering education and in opportunities available to working engineers for part-time graduate education, as well as the encouragement of industry-university cooperation in the field of engineering. Programs were also recommended to provide State funding for teaching assistantships and doctoral fellowships in engineering. It is expected that these proposals will be included in the Regents 1983 legislative program.

Similar programs were among the 1982 State policy recommendations of the Commission on Independent Colleges and Universities. Addressing the problems of engineering education and the future supply of engineers needed by New York industry, CICU recommended enactment of legislation providing increased aid to independent institutions based upon their production of qualified graduates in engineering and the "hard" sciences; graduate fellowships in science and engineering to be jointly funded by the State and industry; programs of distinguished and visiting professorships and guest lectureships in these fields; matching grants for instructional and research laboratory equipment; scholarships for future elementary and secondary teachers of science and mathematics; and extended outreach by educational institutions to New York industry. In keeping with the last objective, CICU has instituted its Science, Engineering, and Research Campus Hook-up (SEARCH), a free service to connect businesses with sources of needed research and development assistance on independent campuses. In May 1982, the Regents approved a master plan amendment to authorize engineering programs at an additional independent institution, New York Institute of Technology.

In January 1982, the State University Trustees adopted a report, "Investment Needs: Engineering and the Engineering Technologies," that outlined State University's responses to concerns about the supply of engineering manpower and that included recommendations for expansion of its programs in engineering and engineering technology. For engineering, the recommendations included the strengthening of existing programs as well as the introduction of additional programs at those campuses that now offer engineering and the addition of

upper-division baccalaureate and master's programs at State University College at New Paltz and at SUNY at Binghamton. A master plan amendment for the proposed programs at the Binghamton campus was approved by the Regents in May 1982.

State University's proposals regarding engineering technology education focus on programs leading to the Bachelor of Technology (B.Tech.) degree. They include strengthening existing B.Tech. programs and developing upper-division B.Tech. programs at the Agricultural and Technical Colleges at Alfred, Cobleskill, and Farmingdale.

Research activities and expenditures by postsecondary institutions have an obvious bearing on economic development through industrial "spin-offs" from these activities and the enhancement of an area's attractiveness as a location for high-technology ventures. The State Science and Technology Foundation administers a Small Grant Program which in 1981-82 awarded over $236,000 to seven New York colleges for basic and applied research. Through its Research Foundation, SUNY has recently established an Industrial Liaison Program to explore and implement technology transfer arrangements, making the University's research resources more readily available to industry. The SEARCH network of the Commission on Independent Colleges and Universities, mentioned earlier, represents another effort to bring university-based research into closer contact with the needs of industry. In addition, a consortium of public and independent institutions is developing a Science and Technology Education and Research Network (STERN). Still in the planning stages, STERN would have a membership of New York research universities and industrial concerns. Its planned activities include an inventory of member institutions' resources for research, referrals based on this inventory, conferences and meetings, short course coordination, and advice for governmental bodies.

In order to eliminate barriers to technological advancement through university research, in 1981 bills which codified revisions made by the State University Trustees to State University's patent policy were passed and signed into law. By giving researchers an equitable share of rewards from their discoveries, this legislation intends to promote technical innovation, encourage university/industry cooperative research ventures, and give incentives to faculty to secure external research and development funding.

The 1980 Statewide Plan included as part of Goal A, Excellence, the following objective related to college and university research:

> 5. By 1990 the amount and quality of research at New York's colleges and universities will increase to the point that:
>
> a) New York institutions will account, in the aggregate, for more than 10 percent of all college and university research expenditures in the United States, and
>
> b) New York's leading research universities will hold or improve their national rankings in terms of research expenditures.

This objective was accepted, with reservations, by the Governor. Table 30 presents research expenditures reported by New York postsecondary institutions for fiscal 1975 and 1980, the most recent year for which complete data are available.

Table 30

RESEARCH EXPENDITURES BY POSTSECONDARY INSTITUTIONS
IN NEW YORK STATE
Fiscal Years Ending
1975 and 1980

Sector/Type	Fiscal Year End 1975	Fiscal Year End 1980	Percent Change 1975-1980
SUNY-Total	70,829,050	109,141,829	+54.1
Central Administration	5,161,390	2,767,708	-46.4
University Center	24,672,226	46,417,892	+88.1
University College	2,486,619	3,974,351	+59.8
Health Sciences Center	11,754,437	10,916,379	-7.1
Specialized College	2,277,353	3,585,773	+57.5
Statutory Colleges	22,737,322	39,284,855	+72.8
Agricultural-Technical	2,249	173,908	+7,632.7
Community College	1,737,454	2,020,963	+16.3
CUNY-Total	31,090,000	53,197,000	+71.1
Independent-Total	271,905,641	351,725,636	+29.4
Multiversity	174,702,261	220,320,465	+26.1
University	22,324,856	23,884,281	+7.0
College Complex	2,900,401	4,734,995	+63.3
College	330,198	1,515,422	+358.9
Specialized College	3,195,228	3,279,709	+2.6
Engineering-Technical	11,059,038	21,134,997	+91.1
Seminary	151,124	35,439	-76.5
Health Sciences Center	57,231,736	76,757,996	+34.1
Nursing School	0	0	—
2-Year School	10,799	62,332	+477.2
Proprietary-Total	0	103,645	—
GRAND TOTAL	373,824,691	514,168,110	+37.5

Source: NYSED, Office of Postsecondary Research, Information Systems, and Institutional Aid, 1982.

The National Center for Education Statistics (NCES) reports 1975 and 1980 research expenditures for all U.S. colleges and universities as follows:

Sector	Fiscal Year End 1975	Fiscal Year End 1980	Percent Change 1975-1980
Public	$2,036,328,000	$3,408,633,000	+67.4
Independent	1,089,904,000	1,690,518,000	+55.1
TOTAL	3,126,232,000	5,099,151,000	+63.1

While research expenditures at New York institutions have risen about 38 percent over the five-year period, those at all institutions in the nation have risen 63 percent. In 1975, New York institutions accounted for 12 percent of total U.S. research and development expenditures at institutions of higher education; in 1980, they accounted for 10 percent. The achievement of Objective 5 (a), therefore, will mean the reversal of this apparent five-year trend.

Objective 5 (b) calls for the State's leading research universities to hold or improve their national rankings in terms of research expenditures. In 1980, according to NCES, Columbia University ranked fifth in the nation in this regard, moving up from sixth place in 1979. Other New York universities among the nation's top 40 institutions in 1980 research expenditures were the statutory State University colleges at Cornell University, together ranking 38th, and the University of Rochester, ranking 39th.

Inter-Institutional Cooperation

The Regents have long had a commitment to the role that interinstitutional cooperation should play in statewide planning efforts. This commitment was first enunciated in the 1964 Statewide Plan; the 1968 and 1972 statewide plans identified such cooperation as one of the Regents priority concerns for higher education.

In New York State, the concept of inter-institutional cooperation has been developed not only through the creation of Regents Regional Advisory Councils, but also through the establishment and encouragement of general and special-purpose consortia and a wide variety of other networks or relationships which build voluntary cooperation among institutions. Many of these relationships are organized on a regional basis, but several examples of state-wide cooperation also exist. The Association of Colleges and Universities of the State of New York (ACUSNY), founded in 1906, conducts a variety of activities in furtherance of the common good of both public and independent higher education in the State. The Commissioner's Advisory Council on Postsecondary Education, composed of the leaders of the postsecondary sectors and 25-30 additional presidents and chief executive officers, undertakes cooperative discussion of issues of broad concern. Another advisory group, formed recently when the Department was revising regulations for the registration of academic programs, developed a Code of Ethics for Advertising, Promotional Literature, and Recruiting. This code, endorsed by the leadership of each of the four major sectors, was adopted in March 1980.

Interinstitutional cooperation serves to support the Regents goal of Excellence by assisting institutions to enhance their educational programs through programmatic coordination, curricular articulation, or cooperative use of equipment or facilities. It may assist institutions to meet the goal of Access more effectively, by enabling them to meet the needs of economically and educationally disadvantaged students, or the residents of sparsely populated areas, through shared activities. By means of coordination and cooperation, institutions can achieve savings through cost avoidance, cost efficiency, and cost effectiveness; these savings, while they clearly support the goal of Effective Use of Resources, may also make significant contributions to the goal of Diversity, by enhancing the viability of institutions that could otherwise not afford to offer as wide a range of programs and services to the students they attract.

A long history of interinstitutional cooperation in New York State has shown that institutions working together frequently can be more effective and efficient than working alone. Looking ahead, in view of the changing nature of the student body, and the likelihood that resources will continue to be limited, higher education must continue to seek improvements in effectiveness and efficiency. This will be especially important in costly disciplines such as the health professions, engineering, and the technologies.

The range of projects and programs in which institutions participate cooperatively is broad. It includes cooperative degree programs, cooperative purchasing arrangements, cross registration opportunities, joint research programs and joint faculty appointments, and cooperative use of libraries and services through a variety of links which expand access and avoid unnecessary duplication of resources. Many of these projects are organized and administered through one of the State's regional consortia.

Additionally, following the adoption in 1980 of regulations on off-campus instruction, several interinstitutional programs have been established. Under this arrangement, full degree programs are offered by one institution on the campus of another degree-granting institution, often sharing such resources as facilities, library collections, and computer services.

Three basic types of cooperation are noted: 1) among public institutions within one of the two university systems, 2) between public and independent institutions, in consortia or similar relationships, and 3) between New York State institutions and those in other states, such as the OCLC library network, which now includes 147 public and independent New York degree-granting institutions.

In their progress reports, institutions and sectors were asked to describe particularly effective examples of interinstitutional cooperation in which they had participated in the past two years. The responses received included examples of all three types of cooperation described above.

In its Progress Report, the State University of New York noted that the introduction of its Multiphase Rolling Plan, in 1981, had provided a mechanism in which the University's evaluation efforts are integrated in planning and budgeting. As a result of this process, SUNY hopes to identify opportunities for trades and affiliations of programs among campuses. Additionally, this new approach has enabled SUNY to focus planning and budgeting materials in a systemwide perspective rather than simply on a campus basis. In its 1980 Master Plan, to cite one example of the system-wide approach, State University included a recommendation related to lifelong needs for learning. The SUNY Progress Report notes that a University-wide council has been appointed to address the ways the State University system can respond to the lifelong learning needs of New York State. In this connection, SUNY's Office of Alternative and Continuing Education is sponsoring seminars and conferences to encourage and effect the sharing of resources and ideas in meeting the needs of non-traditional students; the office has developed a consortial training arrangement with nine SUNY institutions on assessment of experiential learning.

State University institutions also participate as members in consortia and other organizations comprised of both public and independent institutions, including:

Associated Colleges of the Mid-Hudson Area
Associated Colleges of the St. Lawrence Valley
Five Associated University Libraries
Hudson-Mohawk Association of Colleges and Universities
Long Island Regional Advisory Council on Higher Education
Rochester Area Colleges
Western New York Consortium

The Commission on Independent Colleges and University (CICU) reported that its member institutions were involved extensively in interinstitutional cooperative arrangements, including faculty sharing, joint curricula, reciprocal course enrollment, facilities sharing, and library consortia. The organizations listed above, which also include public institutions, were among those most commonly mentioned. Concrete projects mentioned include the Student Recruitment Committee operated by the Long Island Regional Advisory Counsel on Higher Education, which creates a common Long Island recruitment brochure mailed to Long Island high school counselors and students, and the academic programming offered to qualified inmates at the Attica Correctional Facility by members of the Consortium of the Niagara Frontier. (The Attica program is funded in part by the Higher Education Opportunity Program.)

City University, in its Progress Report, noted that its recently revised academic planning process is designed to review the size and distribution of CUNY's instructional staff in relation to changing patterns of student enrollment and curricular demand, and project optimal resource allocation for the future. In this sense, the planning process can be directed to enhance system-wide cooperative use of resources, both human and physical. City University is also exploring such options as joint purchase of supplies and library material and the creation of a system-wide inventory of scientific and other equipment.

Included in the Regents 1982 Legislative Program was a proposal to establish a program of competitive grants in support of interinstitutional activities. This competitive grant program would provide funding, up to a maximum of $100,000, to the best proposals submitted to the Education Department and is aimed at expanding interinstitutional cooperation in the interest of enhanced effectiveness. If approved and funded, this program is anticipated to award approximately five grants a year, in support of the Regents goals of excellence, access, diversity, and the effective use of resources.

In order to involve institutions in cooperative regional planning, the Department included an invitation to participate in regional reviews as part of the recently approved regulations on Off-Campus Instruction. The Genesee Valley Regents Regional Council came forward with such a proposal, which was accepted by the Department in November 1980. Since that time, instead of direct canvasses by the Department of institutions in the Genesee Valley Region on proposals requiring action by the Regents and applications for extension centers (requiring approval by the Commissioner), the Department has provided this information to the Genesee Valley Council. The Council reviews all such proposals and applications and makes recommendations to the Regents or to the Commissioner, as appropriate. The Department reviews the Council's recommendation, as it would the results of an institutional canvass in other regions, in arriving at its own recommendations. The advantage of the collective approach to planning, as practiced in the Genesee Valley, is that local institutions have the opportunity to discuss and work out differences among themselves before the State becomes involved.

Chapter 5

PROGRESS TOWARD ACHIEVING THE REMAINING OBJECTIVES

Quality Improvement Measured by Student Skills and Knowledge.

Communication Skills

In their 1982 progress reports, institutions were asked to identify requirements related to the development of communications skills for their undergraduate programs. Five specific areas of interest were identified: the assessment of communications skills of persons admitted to undergraduate study; institutional systems to remediate deficiencies in communications skills; methods used to ensure graduation competencies of persons earning associate or baccalaureate degrees; any required competence in a second language; and requirements related to oral communications skills, if any.

The State University reported that its campuses approach this issue in diverse ways, and the University does not plan to impose a single standard of evaluative mechanisms on all institutions across the system. In a broad sense, the State University Progress Report notes that the excellence of the University's academic offerings is maintained by internal campus reviews and accreditation through voluntary external agencies.

The SUNY report does note that individual campuses have been conducting analyses of achievement in specific areas, such as basic skills in writing and mathematics, often by examining student ability in these areas as part of the admissions process or for the purpose of course placement. However, the report adds that, since the encouragement to move to outcome measures comes at a time of budgetary restriction, there are no funds to apply to this effort and, therefore, progress may be slow.

In its report the Commission on Independent Colleges and Universities states generally that most institutions already have well developed programs for improvement of oral and written communications skills. These programs typically incorporate the use of standardized tests to assess the skills of entering freshmen, and additional diagnostic tests for students identified as needing remediation. Most institutions do not require pregraduation testing, relying instead on the premise that students meet institutional standards in communication in order to complete the normal course requirements for graduation.

Since 1970, the City University has been committing significant resources and expertise to offering programs in the basic skills to meet the needs of increasing numbers of entering students. The core of this effort is the Freshman Skills Assessment Program, which is designed to identify the basic skills problems of students and direct students into courses geared to their needs. All students who have matriculated since 1978 have been tested in reading, mathematics, and writing. Students must meet or exceed the basic skills competence level in order to advance to the upper division.

City University's Instructional Resource Center, established in 1979, collects and disseminates information on basic skills instruction to the University's own faculty and to a national audience. City University's pioneering efforts in basic skills instruction and management have been widely recognized. Most recently, this leadership role has been acknowledged by the establishment at CUNY of the National Testing Network in Writing, which serves as a national clearinghouse for issues in the assessment of writing at the postsecondary level.

Second Language Competency

None of the sector Progress Reports addressed the issue of second language competency as a requirement either for admission to an institution or for graduation. This is somewhat disappointing in view of the fact that, over the last several years, the Regents have devoted considerable attention to discussing fundamental changes in New York State's educational program — at all levels — designed in part to prepare a multilingual population, with individuals able to communicate in English and at least one other language. A paper on this topic, "Education for a Global Perspective," was presented to the Board of Regents in December 1980. At their May 1982 meeting, the Regents reviewed and discussed a plan evolving from that paper, with the intention of seeking public response during the summer and taking action on the plan in the fall. The recommendations included in "Education for a Global Perspective, a Plan for New York State" could have a significant effect on higher education institutions, particularly with regard to the need to prepare elementary and secondary school teachers qualified to teach their own subject matter in a foreign language and to assist with inservice training of personnel now employed in the schools. An additional implication of the plan is that students who have attained mastery of a foreign language in elementary and secondary school may be expected to wish to continue these studies in college.

The plan as proposed rests on the premise that New York's economic welfare depends more heavily than that of many other states upon its position as a world trade, information, service, manufacturing, and financial center. As a consequence, the skills to communicate across cultural and linguistic barriers should enhance individual opportunities to succeed in the world of work and, more broadly, enhance the State's economic competitiveness in national and world markets by creating an employment pool prepared for the realities of an interdependent and multicultural world.

The issues related to the plan, and to its effect on postsecondary institutions, are of ongoing significance. Comments from a broad variety of constituencies, including presidents and other academic officers of colleges and universities, will be solicited before action is taken on the proposed global perspective plan.

Quantitative Skills

In the area of quantitative skills, in addition to the questions noted earlier related to assessment of entering students, remediation, and graduation requirements, institutions were asked to describe any requirements for competence in the use of computers which they may have in place.

In general, the sector responses to this question paralleled their comments on the issue of communications skills. City University has included mathematics in its four-volume series describing its basic skills research and programs, Basic Skills Programs at The City University of New York; it has also developed a modular program in mathematics as a promising technique to meet individual needs.

According to the Commission on Independent Colleges and Universities, in the independent sector mathematics requirements tend to be more program-specific than institu tion-wide (that is, requirements may be set by each department rather than for all undergraduates), but most institutions demand some facility in mathematics and many report increased emphasis on mathematics and computer literacy. An increasing number now require computer literacy for graduation and several others plan to make it a requirement by 1990.

Remediation

An important issue for educational institutions at all levels, and one which must be addressed in an ongoing way from an early age, is that of deficiencies in basic skills. Postsecondary institutions have a responsibility to provide well-designed remedial programs for any admitted students identified as requiring such help.

The Regents and the Department, recognizing the pervasiveness of this problem, have undertaken a number of initiatives aimed at identifying and correcting skills deficiencies in the elementary and secondary schools. The Resource Allocation Plan and the standards for registration of high schools, including both acceptable pass rates on the Regents Competency Tests and acceptable retention rates, are designed to ensure that remediation is provided before high school graduation. As the effectiveness of the schools in developing basic skills improves, it should become possible for colleges and universities to scale down such programs. However, other factors, such as the changing characteristics of the student body, and the participation of high-school graduates from outside New York and abroad, non-high school graduates, and, especially, adult students who may not be prepared for today's college curriculum, necessarily imply that remediation will still need to be made available.

High school graduation requirements, including the Regents Competency Tests, are intended to assure that all New York high school graduates meet defined levels of competency. The Department expects that about one-half of each year's graduates will demonstrate basic skills mastery by passing Regents Examinations in English and mathematics. The other half will take the Regents Competency Tests (RCT's) in reading, writing, and mathematics. In June 1981, only 0.5 percent of the candidates for graduation (about 1,100 out of 220,000 pupils) failed to graduate solely because they did not meet the competency requirements. Another 0.6 percent failed to meet the competency requirements but also failed to meet course requirements. However, passing the RCT's and meeting other high school graduation requirements do not necessarily mean that high school graduates have all the knowledge, skills, and attitudes needed to benefit from college-level study. A certain number of new college students will continue to need remediation.

The scope and scale of remedial programs at New York's colleges varies, depending on the number of students who need these services. City University in particular noted that accomplishment of the task of remediation is essential if a significant and growing portion of the students of the University is to have a reasonable chance of success in college-level courses.

There is general consensus that the most fruitful way to improve retention rates and reach the goals both of access to and success in higher education is through improved diagnostic counseling and remedial programs at institutions. Therefore, the Regents will continue to be concerned with the nature of remedial programs and with standards for their performance. In 1982, the Department submitted to the Fund for the Improvement of Post-Secondary Education a proposal to study remedial programs at a set of representative institutions and explore methods which might be used to measure their outcomes. Unfortunately, the Fund did not accept the proposal for funding. The Department will continue to seek either external or State funding for this project, and for other potentially fruitful approaches toward establishing criteria for remedial education.

Student Retention

In support of the goal of Excellence, the sectors were asked to address the issue of retention. Each sector was asked to present examples of current efforts and new ideas that would be useful to share with the higher education community.

State University of New York reported that in 1978 it performed a University-wide study, Retention of Students: a Resource Manual, in which it explored reasons students decided to leave college. SUNY found that personal reasons were important factors in causing attrition, with academic dismissal and financial problems less significant. Other important reasons for student attrition included lack of adequate advisement and faculty/student interaction, environmental factors, and problems in peer relationships. State University continues to devote staff and resources to this issue and, since April 1979, has published a quarterly "SUNY Retention Newsletter" to share examples of excellent retention programs.

State University campuses reported a variety of retention programs. The following is a representative sample of the types of programs developed:

- State University College at Potsdam offers a program for career indecision. The program employs faculty members, a computer-based guidance system, workshops, seminars, and a three-credit course in personal development.

- State University College of Environmental Science and Forestry offers an extensive orientation process, which features a one day summer session providing prospective students with information about each major academic program and available college services.

- State University Agricultural and Technical College at Cobleskill, at registration, places students who have a low probability of academic success based on test scores in an intensive advisement program involving coordinated efforts between academic advisors and the counseling center staff.

- State University Agricultural and Technical College at Delhi has developed a system to identify new students who are likely to drop out. The College conducts a survey which asks freshmen questions related to dormitory life, finances, academic requirements, career plans, extra-curricular activities, and remedial study needs.

- Dutchess Community College has developed a counseling program for three special groups of students: older students, disabled students, and students with academic disadvantages. The College operates a series of workshops designed to assist these groups in adjusting to college life.

In its 1982 Progress Report, The City University of New York cited the following factors that determine whether a student stays in college: financial ability (including the availability of financial aid), family responsibilities, academic preparation before entering college, the college environment, the response of faculty to students' needs, the size of classes, the schedule of classes, and the availability of programs. CUNY points out that while some of these factors can be controlled by the colleges, others cannot.

City University states that since 1970 it has committed significant resources to remediation, an area where colleges can make a difference. CUNY reports that remedial

programs respond to the needs of an increasing number of entering students. The core of the University's remediation effort is the Freshmen Skills Assessment Program, which identifies the basic skill problems and ensures that students enroll in courses geared to their needs. Another important component is the Instructional Resource Center. Established in 1974, the Center collects and disseminates information on basic skills instruction and assessment to faculty of the University and to a national audience.

To be certain that the University and its colleges are doing all they can to improve student retention, the Chancellor of City University has appointed a task force of presidents to examine the issue. The goal of the task force is to identify activities which can reduce attrition caused by non-academic factors. Among other activities, the group is now examining the interim results of two research studies on the causes of attrition.

According to the Commission on Independent Colleges and Universities, students most often leave independent institutions for financial reasons. CICU asked the Regents to closely monitor the availability of student aid. CICU said that it intends to develop a better monitoring system through its planning data base and student financial aid dependency models. CICU reported the following other important reasons independent colleges gave for losing students: withdrawal due to poor academic performance, desire for different campus environment, desire to attend school closer to home, desire to be closer to friends and withdrawal due to health or personal problems. According to a review of progress reports from 17 independent institutions (two multiversities, one university, eight college complexes, two colleges, and four two-year schools), more institutions reported academic problems than financial problems as the number one cause cited by students for dropping out, although financial reasons were among the top causes reported by all 17.

CICU stated that virtually all campuses have reported efforts to reduce attrition. Institutions have devoted additional staff and resources to personal and financial aid counseling programs. Colleges have instituted peer counseling programs, especially for freshmen. Institutions have developed workshops to educate faculty on the reasons students leave college. Colleges have increased faculty responsibility for student advisement and counseling. They have increased pre-admission testing and have expanded remedial programs. They also have scheduled programs at convenient times and have improved residence hall environments.

The following examples of retention programs were selected from institutional progress reports:

- Colgate University has developed a system of mid-term warnings regarding academic performance. All students are included in the system but special attention is given to freshmen and those upperclassmen who have had prior academic difficulties.

- Elizabeth Seton College has a Residence Life Project that has developed policies for dormitory living and programming that fosters personal and group development within the residence hall.

- Pace University calls each student who fails to register to determine the reasons for dropping out and whether the student desires to resume study.

- Trocaire College has a Skills Reinforcement Center open to students on a 40 hour per week basis. Remedial self-study modules have been developed in study skills, reading, writing, mathematics, and other subject areas.

Relation of postsecondary education to job markets and to more advanced levels of study.

The 1980 Plan included, under the goal of Excellence, the following objective:

> By 1990 the quality of education offered by postsecondary institutions in New York will be improved, as evidenced by their graduates' record of job placement and admission to more advanced levels of study and as measured by the institutions.

Shifts in degrees granted by field of study

Direct figures for placement of graduates from New York's postsecondary institutions are not available. However, it is possible to gain some idea of the relationship between job markets and fields of study by examining shifts in degrees granted in different fields in the light of job market trends over time. Tables 31, 32, 33, and 34 show numbers of degrees granted in New York State at four levels over five-year intervals. Table 31 shows that while the total number of associate degrees rose 55 percent between 1971 and 1980, the number granted in the general category of pre-baccalaureate liberal arts fell from over 40 percent to not quite 24 percent of the total. At the same time, associate degrees in business and commerce technologies increased from 26 percent of the 1970-71 total to nearly 38 percent of the 1979-80 total. A similar shift in disciplines can be noted in 1969-70 and 1979-80 bachelor's degrees (Table 32) and master's degrees (Table 33). The total number of bachelor's degrees granted rose by about 26 percent, the number of master's degrees by 23 percent. Fields in which significant shifts occurred are shown below:

	Percent of All Degrees Granted			
	Bachelor's		Master's	
Field	1969-70	1979-80	1969-70	1979-80
Business and Management	10.3	17.8	10.7	19.3
Health Professions	3.1	7.8	1.3	6.8
Public Affairs & Services	0.5	3.5	4.8	9.1
Communications	0.7	3.0	0.9	1.8
Computer & Information Sciences	0.2	1.6	0.5	1.3
Education	15.9	7.4	39.1	28.3
Social Sciences	21.4	15.3	7.3	4.7
Letters	11.5	5.5	4.9	3.3
Mathematics	4.1	1.4	2.4	1.0

Parallel shifts have occurred nationwide in the decade. According to the National Center for Education Statistics (NCES), bachelor's degrees in business and management, for example, rose from 13.8 percent of all bachelor's degrees in 1970-71 to nearly 19 percent in 1978-79, whereas bachelor's degrees in education declined from 21 percent to around 14 percent. Only master's degrees in education showed a more precipitous decline in New York than they did across the nation, where they fell only slightly between 1970-71 and 1978-79 (from 38.5 percent to 37 percent of all master's degrees granted).

In the decade just past, fewer students have been majoring in pre-baccalaureate liberal arts, education, letters, mathematics, and social sciences, while growing numbers have been studying business and commerce technologies, business/management, computer science, the

Table 31

ASSOCIATE DEGREES GRANTED IN NEW YORK STATE BY FIELD OF STUDY, 1970-1980

HEGIS	Field	Degrees 1970-71 Number	1970-71 % of all	1974-75 Number	1974-75 % of all	1979-80 Number	1979-80 % of all
TOTAL Associate Degrees	All	30,915		46,343		47,916	
3000	Bus. & Commerce Technologies	8,080	26.1	11,217	24.2	18,059	37.7
5100	Data Processing Technologies	721	2.3	851	1.8	1,341	2.8
5200	Health Services & Paramed. Tech.	3,694	11.9	6,850	14.8	6,279	13.1
5300	Mechanical & Engineering Technologies	3,010	9.7	3,927	8.5	4,666	9.7
5400	Natural Science Technologies	1,006	3.3	2,825	6.1	2,814	5.9
5500	Public Service Related Technologies	1,883	6.1	4,418	9.5	3,458	7.2
5600	Arts & Sciences or General Programs	12,521	40.5	16,255	35.1	11,299	23.6

Source: NYSED, Office of Postsecondary Research, Information Systems and Institutional Aid., 1982.

Table 32

Bachelor's Degrees Granted in New York State by Field of Study, 1960-1980

HEGIS	Field	Degrees: 1960-61 Number	1960-61 % of all	1964-65 Number	1964-65 % of all	1969-70 Number	1969-70 % of all	1974-75 Number	1974-75 % of all	1979-80 Number	1979-80 % of all
Total Bach. Degrees	All	35,813		48,299		67,461		83,047		85,104	
0100	Ag. & Natural Resources	239	0.6	260	0.5	401	0.6	608	0.7	581	0.7
0200	Arch. & Environ. Design	174	0.5	239	0.5	541	0.8	932	1.1	979	1.2
0300	Area Studies	-	-	-	-	223	0.3	358	0.4	294	0.3
0400	Biological Sciences	1,389	3.9	2,234	4.6	2,822	4.2	4,837	5.8	4,587	5.4
0500	Business & Management	4,488	12.5	5,540	11.5	6,986	10.3	9,710	11.7	15,178	17.8
0600	Communications	-	-	-	-	471	0.7	1,380	1.7	2,530	3.0
0700	Computer & Info. Sciences	-	-	28	0.1	165	0.2	613	0.7	1,345	1.6
0800	Education	7,452	20.8	8,981	18.6	10,707	15.9	10,403	12.5	6,334	7.4
0900	Engineering*	3,121	8.7	3,855	8.0	3,895	5.8	3,848	4.6	5,603	6.6
1000	Fine & Applied Arts	1,516	4.2	1,890	3.9	3,014	4.5	4,946	6.0	4,812	5.7
1100	Foreign Languages	957	2.7	1,795	3.7	2,538	3.8	2,193	2.6	1,320	1.6
1200	Health Professions	1,261	3.5	1,069	2.2	2,079	3.1	4,634	5.6	6,644	7.8
1300	Home Economics	312	0.9	321	0.7	524	0.8	1,005	1.2	1,070	1.3
1400	Law	-	-	8	-	35	0.1	25	-	15	-
1500	Letters	3,236	9.0	5,146	10.7	7,754	11.5	7,160	8.6	4,702	5.5
1600	Library Science	49	0.1	73	0.2	42	0.1	2	-	3	-
1700	Mathematics	1,203	3.4	1,869	3.9	2,767	4.1	2,331	2.8	1,193	1.4
1900	Physical Sciences	1,635	4.6	2,004	4.1	2,198	3.3	2,060	2.5	1,895	2.2
2000	Psychology	1,225	3.4	1,972	4.1	4,065	6.0	6,599	7.9	5,278	6.2
2100	Public Affairs & Services	-	-	-	-	305	0.5	1,657	2.0	2,992	3.5
2200	Social Sciences	6,558	18.3	10,028	20.8	14,447	21.4	14,896	17.9	13,037	15.3
2300	Theology	415	1.2	211	0.4	121	0.2	63	0.1	48	0.1
4900	Interdisciplinary Studies	583	1.6	766	1.6	1,361	2.0	2,729	3.3	4,700	5.5

*Includes Engineering Technologies

Source: NYSED, Office Of Postsecondary Research, Information Systems and Institutional Aid, 1982

Table 33

MASTER'S DEGREES GRANTED IN NEW YORK STATE BY FIELD OF STUDY, 1960-1980

HEGIS	Field	Degrees: 1960-61 Number	1960-61 % of all	1964-65 Number	1964-65 % of all	1969-70 Number	1969-70 % of all	1974-75 Number	1974-75 % of all	1979-80 Number	1979-80 % of all
Total Master's	All	11,096		14,673		26,653		38,692		32,862	
0100	Ag. & Natural Resources	78	0.7	43	0.3	63	0.2	110	0.3	122	0.4
0200	Arch. & Environ. Design	56	0.5	90	0.6	109	0.4	310	0.8	288	0.9
0300	Area Studies	-	-	-	-	44	0.2	83	0.2	73	0.2
0400	Biological Sciences	239	2.2	339	2.3	550	2.0	594	1.5	658	2.0
0500	Business & Management	789	7.1	989	6.7	2,844	10.7	4,772	12.3	6,352	19.3
0600	Communications	-	-	-	-	241	0.9	381	1.0	581	1.8
0700	Computer & Info. Sciences	-	-	1	-	139	0.5	227	0.6	433	1.3
0800	Education	4,231	38.1	5,510	37.6	10,427	39.1	15,787	40.8	9,301	28.3
0900	Engineering	1,171	10.6	1,273	8.7	2,115	7.9	1,739	4.5	1,673	5.1
1000	Fine & Applied Arts	404	3.6	527	3.6	720	2.7	1,201	3.1	1,286	3.9
1100	Foreign Languages	256	2.3	440	3.0	581	2.2	708	1.8	409	1.2
1200	Health Professions	75	0.7	92	0.6	357	1.3	1,007	2.6	2,220	6.8
1300	Home Economics	41	0.4	53	0.4	97	0.4	116	0.3	278	0.8
1400	Law	218	2.0	310	2.1	382	1.4	484	1.3	522	1.6
1500	Letters	693	6.2	951	6.5	1,306	4.9	1,729	4.5	1,079	3.3
1600	Library Science	348	3.1	541	3.7	1,035	3.9	1,221	3.2	679	2.1
1700	Mathematics	342	3.1	505	3.4	629	2.4	669	1.7	326	1.0
1900	Physical Sciences	400	3.6	551	3.8	606	2.3	563	1.5	495	1.5
2000	Psychology	215	1.9	415	2.8	450	1.7	1,021	2.6	695	2.1
2100	Public Affairs & Services	-	-	-	-	1,280	4.8	2,383	6.2	3,002	9.1
2200	Social Sciences	989	8.9	1,495	10.2	1,955	7.3	2,328	6.0	1,549	4.7
2300	Theology	197	1.8	193	1.3	389	1.5	203	0.5	230	0.7
4900	Interdisciplinary Studies	354	3.2	352	2.4	334	1.3	1,011	2.6	611	1.9

Source: NYSED, Office of Postsecondary Research, Information Systems and Institutional Aid, 1982.

Table 34

DOCTORAL DEGREES GRANTED IN NEW YORK STATE BY FIELD OF STUDY, 1960-1980

HEGIS	Field	Degrees: 1960-61 Number	1960-61 % of all	1964-65 Number	1964-65 % of all	1969-70 Number	1969-70 % of all	1974-75 Number	1974-75 % of all	1979-80 Number	1979-80 % of all
Total Doctorates	All	1,599		1,947		3,268		3,451		3,375	
0100	Ag. & Natural Resources	35	2.2	29	1.5	44	1.3	62	1.8	55	1.6
0200	Arch. & Environ. Design	-	-	1	0.1	6	0.2	15	0.4	7	0.2
0300	Area Studies	-	-	-	-	5	0.2	16	0.5	3	0.1
0400	Biological Sciences	128	8.0	177	9.1	286	8.8	329	9.5	380	11.3
0500	Business & Management	23	1.4	34	1.7	76	2.3	91	2.6	61	1.8
0600	Communications	-	-	-	-	1	-	9	0.3	20	0.6
0700	Computer & Info. Sciences	-	-	-	-	10	0.3	23	0.7	32	0.9
0800	Education	398	24.9	388	19.9	637	19.5	596	17.3	658	19.5
0900	Engineering	102	6.4	197	10.1	340	10.4	305	8.8	235	7.0
1000	Fine & Applied Arts	48	3.0	52	2.7	64	2.0	108	3.1	110	3.3
1100	Foreign Languages	45	2.8	64	3.3	128	3.9	120	3.5	94	2.8
1200	Health Professions	13	0.8	26	1.3	48	1.5	32	0.9	122	3.6
1300	Home Economics	10	0.6	7	0.4	27	0.8	21	0.6	23	0.7
1400	Law	11	0.7	11	0.6	7	0.2	4	0.1	3	0.1
1500	Letters	107	6.7	121	6.2	234	7.2	325	9.4	270	8.0
1600	Library Science	-	-	-	-	4	0.1	2	0.1	10	0.3
1700	Mathematics	52	3.2	81	4.2	119	3.6	98	2.8	90	2.7
1900	Physical Sciences	209	13.1	276	14.2	419	12.8	365	10.6	296	8.8
2000	Psychology	142	8.9	130	6.7	210	6.4	343	9.9	384	11.4
2100	Public Affairs & Services	-	-	-	-	48	1.5	47	1.4	55	1.6
2200	Social Sciences	236	14.8	305	15.7	492	15.1	464	13.4	407	12.1
2300	Theology	28	1.8	32	1.6	24	0.7	45	1.3	49	1.4
4900	Interdisciplinary Studies	12	0.8	16	0.8	39	1.2	38	1.1	11	0.3

Source: NYSED, Office of Postsecondary Research, Information Systems and Institutional Aid, 1982.

health professions, and public affairs and services. The conclusion can hardly be escaped that students' awareness of the job market is affecting their chosen fields of study. Concerning careers in education, the 1980-81 edition of the Occupational Outlook Handbook published by the U.S. Department of Labor notes that fewer births in the 1950's have caused elementary enrollments to decline since 1967, when they peaked at nearly 32 million; except for certain science and mathematics areas, the U. S. Department of Labor expects the supply of secondary school teachers nationwide to exceed openings by a large number through the 1980's. (As noted below, the Regents do not expect this to be true in New York.) For business and computer occupations, health occupations, and communications, however, employment is expected to increase faster than the average for all occupations through the decade.

NCES expects the trends in field of study noted above to persist, nationally, through 1988-89: at the bachelor's and master's levels, significant increases are projected in computer and information sciences, health professions, and agriculture and natural resources; engineering, engineering technologies, and communications are also expected to increase at the baccalaureate level, while public affairs and services rise at the master's level. Decreases are projected at both levels in education, letters, mathematics, and statistics; in addition, the number of bachelor's degrees awarded in social sciences is expected to continue to drop, along with the number of master's degrees awarded in foreign languages.

The picture at the doctoral level is somewhat different. Here, the number of degrees awarded in business and management has dropped in New York from 76 in 1969-70 (2.3 percent of the total of 3,268) to 61 in 1979-80 (1.8 percent of the total of 3,375). Other fields showing a decline in the percentage of all New York doctorates over the past decade include mathematics (from 3.6 percent to 2.7 percent) and physical sciences (from 12.8 percent to 8.8 percent). Doctorates in education represented 19.5 percent of all doctorates awarded in the State in 1969-70 and 1979-80 (but 17.3 percent in 1974-75); doctorates in letters increased slightly in the decade (from 7.2 percent to 8 percent; in 1974-75, the middle year, they were 9.4 percent of all doctorates). The greatest increases in doctorates occurred in psychology (from 6.4 percent to 11.4 percent), biological sciences (from 8.8 percent to 11.3 percent), and health professions (from 1.5 percent to 3.6 percent). According to NCES, in the next ten years, nationally, doctorates are expected to increase in public affairs and services, agriculture and natural resources, and the health professions, and to decrease in foreign languages, mathematics, and letters.

Occupational Education and Higher Education

The shift observed in the 1970's is expected to continue: from traditional liberal arts disciplines such as letters and mathematics to more vocationally oriented disciplines such as business/management and computer science. Postsecondary institutions, therefore, will probably increase their coordination with other providers of occupational education. The current long-range plan for occupational education in New York State sets 15 priorities and lists a number of specific activities ranged under three broad goals. These goals and priorities are listed in Appendix E. The 1980 Statewide Plan for postsecondary education was one of the documents consulted in preparing the occupational-education plan, and the two plans' goals, objectives, and activities intersect at many points. The activities in which postsecondary institutions will play a part are included in the listing in Appendix E.

Many activities in the New York State Program Plan for the Administration of Occupational Education for fiscal 1983-1987 emphasize articulation and coordination of efforts among agencies which provide occupational education and counseling. This emphasis reflects a policy statement adopted by the Regents in April 1982, "Youth Education and Employment: A Comprehensive Approach." The report indicates the high incidence of

unemployment among persons aged 16 to 19 (30 to 40 percent in some areas) and describes the wide variety of resources available in the State for youth who need assistance to prepare for employment and find it: public and independent schooling at all levels, vocational rehabilitation services, the New York State Job Service, the Comprehensive Employment and Training Act (CETA) system. It calls for effective coordination of all these disparate resources at the local, regional, and State levels.

Manpower Studies

The Education Department has recently conducted manpower studies in selected professions in order to assist planning efforts in the higher education community. Since the publication of the 1980 Statewide Plan, reports have been prepared on manpower supply and demand in the State for physicians, dentists, engineers, and persons certified for public-school service.

The "Physician Manpower Survey" report (April 1982) and the report on "State Support for Dental Education in New York" (March 1982) were based on data from surveys conducted in conjunction with the required biennial re-registration of licensed practitioners. As of July 1981, when processing of the physician manpower survey was completed, 55,574 licensed physicians had returned usable survey responses; 35,552 were practicing in the State. Of these, about 25 percent reported primary work upstate, 75 percent downstate (the lower Hudson Valley, New York City, and Long Island). The U.S. Department of Health and Human Services has divided New York into eight Health Systems Agency (HSA) regions. Table 35 shows these regions, their estimated 1980 populations as given in the Physician Manpower Survey Report, and the ratios of licensed physicians and responding physicians to population for each region. Statewide, the survey responses suggested that 89 percent of New York's physician manpower pool practice full-time, only 3 percent are inactive or retired, and 46 percent are involved in primary care. (Primary care is defined as that care provided to most patients at their entrance into the health care system, usually in an office visit, by general/family practitioners, internists, obstetricians, or pediatricians.) In 1975, the most recent major study of physician manpower supply and demand was published, the "Report of the Regents Task Force on Medical School Enrollment and Physician Manpower." The Department, in cooperation with the New York State Health Planning Commission, is now preparing a review of projected manpower supply and demand in the State. This review may lead to new recommendations related to physician manpower and education.

The March 1982 report on "State Support for Dental Education in New York" cited results of the 1980 Education Department survey of registered dentists to show that New York has a ratio of 1,624 people to each active dentist. (The American Dental Association reported in 1979 that New York's ratio was 1,564 people per active dentist, compared to a national average of 2,076.) The geographical distribution of practicing dentists across the State was reported to be somewhat uneven according to the Department's 1980 survey: 75 percent are located downstate, where 66 percent of the State's people live. Population-to-dentist ratios by county vary from 714 to 1 in New York County (Manhattan) to 6,894 to 1 in Fulton County. The report concluded that if the supply of new dentists remains at current levels, the total supply of dentists in the State should remain stable in the foreseeable future. These findings, together with current and projected data on New York's four dental schools, led the Regents to make four recommendations: (1) that the total enrollment of dental students not be increased in the aggregate; (2) that no further cuts be made in existing student loan programs, and that the Department review and make recommendations concerning student aid for professional students; (3) that the proportion of minority students in professional programs be increased, as recommended in the 1980 Statewide Plan; and (4) that the Department, in cooperation with the State Division of the Budget, undertake a study of State support for independent dental education.

Table 35

PHYSICIAN - POPULATION RATIOS IN HEALTH SYSTEMS AGENCY (HSA) REGIONS
New York State, 1980

HSA; Counties	1980 Population	Ratio; licensed Physicians	Ratio; responding Physicians
I. Western New York Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Niagara, Orleans, Wyoming	1,664,728	1:568	1:709
II. Finger Lakes: Chemung, Livingston, Monroe, Ontario, Schuyler, Seneca, Steuben, Wayne, Yates	1,203,052	1:469	1:584
III. Central New York: Cayuga, Cortland, Herkimer, Jefferson, Lewis, Madison, Oneida, Onondaga, Oswego, St. Lawrence, Tompkins	1,405,794	1:626	1:757
IV. N.Y.-Penn.: Broome, Chenango, Tioga	312,804	1:568	1:714
V. Northeastern N.Y.: Albany, Clinton, Columbia, Delaware, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington	1,362,774	1:536	1:686
VI. Hudson Valley: Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, Westchester	1,931,293	1:345	1:539
VII. New York City: Bronx, Kings, New York, Queens, Richmond	7,071,030	1:345	1:381

Table 35 (contd.)

HSA; Counties	1980 Population	Ratio; licensed Physicians	Ratio; responding Physicians
VIII. Nassau-Suffolk: Nassau, Suffolk	2,605,813	1:385	1:581
Total New York State	17,557,288	1:402	1:494

Sources: NYSED: Division of Professional Licensing Services and Office of Postsecondary Research, Information Systems and Institutional Aid, 1982.
Population figures: U.S. Bureau of the Census.

The report on "Engineering Manpower and Engineering Education in New York State" was adopted by the Regents in June 1982. This report made nine recommendations, based on a review of existing State and national data and on the results of a survey of all institutions in New York State offering programs in engineering or engineering technology at the baccalaureate level or above. The study found that demand for engineering manpower has been growing rapidly in recent years, both in the State and nationwide. Although experts disagree, it seems likely to remain relatively strong through the 1980's. This demand, and the high starting salaries which it has generated, have caused New York undergraduate engineering enrollments to rise by an average of 7.5 percent per year in the past five years. For the same reasons, the numbers progressing to graduate study have declined, and some experienced engineering professors have been drawn into industry. As a result, existing engineering programs are operating at or near capacity. Therefore, the Regents recommended:

(1) an expansion of the total capacity in undergraduate engineering education in New York State by 5 to 10 percent by 1985;

(2) an immediate, limited expansion of opportunities for part-time graduate education for the employed engineer, particularly in areas of high industry concentration;

(3) State encouragement of programs of industry-university cooperation to alleviate the faculty shortage and the problem of obsolete equipment in engineering colleges;

(4) the examination of alternatives to enhance engineering faculty salaries;

(5) State programs to increase both the number and the financial stipends of teaching assistantships in engineering schools which offer graduate programs;

(6) a State program of substantial graduate fellowships for full-time students in doctoral-level engineering programs;

(7) authorization and funding of five Centers for Advanced Technology, described in the Regents 1982 Legislative Proposals;

(8) authorization and funding of Research Equipment Acquisition Grants, described in the Regents 1982 Legislative Proposals, and further study to determine the dimensions of the need for additional engineering instructional and research laboratory equipment; and

(9) continuation of the Department's efforts to ensure the quality of engineering education programs in New York State.

The May 1982 report on "The Supply and Recruitment of Persons Certified for Public School Service" found that between 1975 and 1979, the number of persons completing registered teacher certification programs in the State declined by 44.4 percent and the number certified by individual evaluation declined by 40.1 percent. These declines were sharper than the decline in total public school enrollment during the period. Between 1975 and 1979, the public school employment rate of newly certified graduates from registered programs increased from 10.3 percent to 13.5 percent. A 1981 survey of school district and BOCES superintendents, excluding New York City, generated a 98.6 percent response. Data from this survey indicated that the four large cities (Buffalo, Rochester, Syracuse, and Yonkers) have far fewer applicants from whom to select public school staff members than

do other school districts; districts with 10,000 or more pupils also have fewer applicants for positions. The average ratio of applications to available positions among the 12 school regions in the State ranged from five applications per position in the Western region to 17 in the Nassau-Suffolk and Mid-Hudson regions. Certification areas for which the largest number of school districts indicated quantitative problems in filling positions were mathematics, business, industrial arts, English, general science, speech and hearing, music, learning disabilities, and school psychologist. In New York City, areas of service expected to be in short supply in 1982-83 were biology, physics, accounting, drafting, industrial arts, English, speech improvement, mathematics, bilingual-secondary, and vocational trade-technical. The report indicated that the Department will take the following actions: (1) periodically gather and report appropriate supply and demand data for persons certified for public school service, making these data available to college and university personnel, school districts, and the public; (2) encourage the establishment of regional councils composed of college and school district personnel to help decision-makers keep abreast of emerging personnel needs; (3) work with representatives from city school districts with 10,000 or more pupils to explore ways of encouraging applicants to seek teaching positions in those districts; and (4) assist the New York City school district in four major ways. These include assistance in bringing about (a) greater conformity of City licensing procedures to State certification procedures, (b) improvement of the examination process for candidates and the posting of eligibility lists, (c) more adequate assessment and forecasting of short-term and long-range teacher supply and demand in the City, and (d) for City school districts experiencing severe recruitment/staffing problems, development of a school district/teacher profile to assist in candidate recruitment.

Summary

The changes in proportions of degrees awarded by field in New York parallel national trends in the past decade. These shifts indicate a natural adjustment, through choices made by the consumers of postsecondary education, to perceived job-market needs. The Education Department will continue to produce studies of manpower supply and demand in various professions, in order to help the State's system of higher education in anticipating these trends and planning to meet them.

Improvement of academic support services — libraries and computers

The excellence of teaching and research in New York's postsecondary institutions depends substantially on the excellence of the State's libraries. Academic libraries are measured in part by their ability to maintain strength by increasing holdings from year to year. As major libraries are increasingly involved in the technological advances that promote efficiency and accessibility, the degree to which libraries provide access to bibliographic utilities, such as inter-library loan networks and computerized data bases, becomes another important concern.

The Coordinated Collection Development Program, established by Chapter 718 of the Laws of 1981, is a significant step toward the accomplishment of the Regents objectives for library development. In the first year of this program, 1981-82, just over $500,000 in grants was distributed to 165 college and university libraries; these libraries are cooperating with the State's nine Reference and Research Library Resources Systems (3R's) in planning for regional coordinated collection development. To assist in the planning process, the Department held an invitational conference to provide an opportunity for staff and library representatives to work with nationally recognized experts to produce an outline of the ordered elements of a regional plan.

In addition to focusing on collection development planning, regional groups have also begun planning for the linkage of various computerized data bases. These efforts are making progress toward the Regents objectives that, by 1990, students, faculty, and other researchers in New York's colleges and universities will have total bibliographic access to all academic library resources in the State. This objective has not been reached by 1982, but significant steps have been taken toward its accomplishment. In 1979, a total of 114 of New York's public and independent college and university libraries received on-line bibliographic services from OCLC (On-line Computer Library Center, formerly the Ohio College Library Center), through a contract administered by the State University of New York. This number increased to 119 by 1980, and currently stands at 147. In addition, four libraries (at Columbia, Cornell, NYU, and SUNY Binghamton) are members of RLIN (Research Library Information Network). Thus, there has been a 26.9 percent increase in the number of college and university libraries that have computer terminals and access to bibliographic data bases in the two-year interval since 1980. This increase suggests that the Regents call for a 50 percent increase in this availability between 1980 and 1984 can be attained.

New York continues to maintain its leadership position in academic library strength. In 1981, the collections in the libraries of State University totalled over 12 million volumes; those in City University's libraries exceeded 4 million volumes; and independent colleges and university libraries had total holdings exceeding 36 million volumes. It had been estimated that, in order to retain their national leadership position, the State's library holdings would have to increase by one percent each year. In fact, between 1979-80 and 1980-81, the total number of volumes in the State's libraries increased by 2.6 percent, to more than 52 million volumes, and by 1981-82 there had been a total 5 percent increase over 1979-80, for an average annual increase two and a half times as great as is needed to sustain progress towards achievement of this objective.

In their 1982 progress reports, institutions were asked to list the kinds of library instructional services they make available to students, and to describe the providers and the extent of those services.

State University reported that all libraries of the SUNY system provide library instruction for students. In several cases, these are credit-bearing courses provided by the library faculty. A University-wide clearinghouse of library user instructional materials has been established and is maintained at the State University College of Environmental Science and Forestry. Periodically, the University publishes directories and catalogues of these materials and makes them available to all its campuses.

According to the City University report, recent budget cuts have greatly impaired the University's ability to support teaching, research, and public service. Since the fiscal crisis of 1975, professional and clerical staff reductions, particularly among part-time but also among full-time clerical personnel, have made it necessary to reduce the quality and hours of service to students and faculty. However, membership of most City University libraries in OCLC does provide some increased degree of access. City University is committed to move in the direction of improving its library system by increasing cooperative University-wide services, such as a coordinated collection development program, delivery system, and system-wide contracts for binding, periodical subscriptions, computers and automated information systems. In the long run, this should provide significant financial savings, in turn allowing important service benefits.

In its consolidated report, the Commission on Independent Colleges and Universities notes that its member institutions are relying increasingly on bibliographic utilities for a variety of services, including on-line ordering and cataloguing of material, on-site access, and inter-library loans. The majority of CICU institutions participate in the SUNY/OCLC network; three belong to RLIN. A number also subscribe to one or more of several on-line information and retrieval systems, such as DIALOG (a Lockheed service), Medline, ERIC, LEXIS, or the New York Times Information Bank. The ability to expand these services in the future will depend on financial considerations.

Library user instructional programs at these institutions have been increasing. Instruction may be assignment-related, course-related, or discipline-related, or it may be a part of general freshman or transfer orientation programs.

Adult Access to Postsecondary Education

Under the goal of Access, the Regents 1980 Statewide Plan set the following objective:

> By 1990 the educational attainment of adults in New York will significantly exceed the national mean.

Table 36 displays the level of educational attainment of adults 25 years and over in New York State and the United States since 1940. The population pools identified in this table were derived from two sources: the U.S. Census of the Population (for 1940, 1950, 1960, and 1970), which provided an actual count of adults in each pool and the Bureau of the Census Current Population Surveys (for 1975, 1978, and 1981), which determined the adult population in each pool through a sample of the population. Also, 1975 and 1978 sample data employed characteristics of the population found in the 1970 Census to inflate sample data, while 1981 sample data employed characteristics of the population found in the 1980 Census to inflate the sample data. The trends identified in Table 36 may be affected by the above factors. Historically, New York has been ahead of the rest of the country in the proportion of the adult age group with four or more years of college, but behind the rest of the country in the proportion of high school graduates. In other words, New York's adult population showed a wider range of educational attainment than other states, greater concentrations of people at the high and low extremes. The most recent population survey (1981) suggests that New York has retained a slight advantage over the rest of the country in the proportion of college educated adults, and has remained somewhat behind the rest of the country in the proportion of adults receiving at least four years of high school. In 1981, 17.8 percent of adults in New York State had four or more years of college; in the whole of the United States 17.1 percent of adults had this level of education. In 1981, 69.0 percent of adults in New York State had at least four years of high school, a slightly lower percentage than in the whole of the United States - 69.7 percent.

As may be seen in Table 36, younger adults (age 25 to 44) had substantially higher levels of educational attainment than the entire adult age cohort 25 and over. In 1981, 83.4 percent of adults ages 25 to 44 had at least four years of high school and 24.9 percent had four or more years of college. In this age category, adults who live in New York State had higher levels of educational attainment than all adults in the country; the New York State percentage is significantly higher for younger adults with four or more years of college. In 1981, 82.9 percent of 25 to 44 year olds in the country had at least four years of high school and 22.5 percent had four or more years of college.

Adults, 25 years and over, constitute approximately one-third (36 percent) of all students attending colleges and universities for credit in New York State. If head-count enrollment is converted to full-time equivalent enrollment, the proportion is lower (26 percent), because most adult students enroll on a part-time basis. Adults make up a majority for every type of enrollment, except for full-time undergraduate and full-time first professional enrollment. Table 37 shows the age distribution of students by level of study. In fall 1981, 13 percent of full-time undergraduates (74,255 students), 62 percent of part-time undergraduates (156,529 students), 41 percent of full-time first-professional students (9,055 students), 86 percent of part-time first-professional students (2,171 students), 64 percent of full-time graduate students (30,181 students), and 83 percent of part-time graduate students (81,436 students) were 25 years old and over.

Adult participation rates may be determined by dividing adult enrollment for credit by the population pool eligible for that enrollment. The adult population pool for undergraduate education may be defined as the population over 25 years old that has attained four years of high school, or four years of high school and between one and three years of college. The adult population pool for graduate education may be defined as the population over 25 that has attained four or more years of college. Table 38 shows adult participation rates for undergraduate and graduate education. In 1981, 4.3 percent of adults in the undergraduate pool participated in undergraduate education, 1.4 percent as full-time undergraduates and 2.9 percent as part-time undergraduates. In 1981, 6.0 percent of adults in the graduate pool participated in graduate education, 1.6 percent as full-time graduate students and 4.4 percent as part-time graduate students.

Younger adults participated at consistently higher rates than older adults. Participation rates dropped precipitously for adults over 44 years of age. In fall 1981, 7.2 percent of 25 to 44 year olds in the undergraduate pool participated in undergraduate education, while only 1.2 percent of adults 45 and over participated. In the fall of 1981, 8.6 percent of 25 to 44 year olds in the graduate pool participated in graduate education, while 1.6 percent of adults 45 and over participated.

Table 39 displays adult participation rates for 1978 and 1981. It should be noted that the trends in participation rates may be affected by the fact that characteristics of the population found in the 1970 Census were employed to inflate Current Population Survey sample data used for eligible pools in 1978 and characteristics of the population found in the 1980 Census were used to inflate Current Population Survey sample data for eligible pools in 1981. In recent years, adult participation rates have increased for undergraduate education, and have decreased for graduate education. In 1978, 3.9 percent of adults 25 years old and over participated in undergraduate education; in 1981, the rate increased to 4.3 percent. Participation rates for undergraduate education increased in every adult age category (25 to 34, 35 to 44, and 45 and over). In 1978, 6.6 percent of adults 25 and over participated in graduate education; in 1981, the participation rate declined to 6.0 percent. The participation rate decline stemmed from a dramatic decline in the participation rate of 25 to 34 year olds (from 13.0 percent to 10.4 percent); the participation rate of 35 to 44 year olds held constant, and the participation rate of adults 45 and over increased somewhat between 1978 and 1981.

The Regents and the Department are involved in a number of activities to assist adults in obtaining postsecondary education. The Regents External Degree Program provides adult learners with an alternative means of earning college degrees, by awarding academic credit and degrees on the basis of an evaluation of college-level knowledge gained by the student. Many types of educational activities may be used to satisfy Regents External Degree requirements, including: degree credit at accredited institutions, proficiency examinations, military service school course work, and certain non-collegiate programs of study. Credit may also be secured through a special assessment of college-level knowledge gained by experience. Fully accredited degrees are offered in eight areas on the associate and baccalaureate degree levels, including the liberal arts and sciences, business, and nursing. During the calendar years 1980 and 1981, 15,423 people enrolled in the Regents External Degree Program, bringing the total number of enrollees since the program's inception in 1972 to approximately 53,000. The Regents External Degree Program conferred 5,398 degrees in calendar years 1980 and 1981.

The College Proficiency Examination Program (CPEP) measures learning in specific college-level subjects by means of examinations. Most people take the tests for course credit or advanced placement at conventional colleges and universities. Some 52 different College Proficiency and Regents External Degree examinations are now offered in the arts and sciences, nursing, business, and education. In the calendar years 1980 and 1981, 21,606 College Proficiency and Regents External Degree examinations were administered.

The Office on Noncollegiate Sponsored Instruction carries out credit evaluations of courses offered by noncollegiate organizations, like corporations, government agencies, labor unions, and professional associations. The program assists adults who have acquired knowledge in non-collegiate settings and desire to pursue degrees in colleges and universities. Based on information gathered from a variety of sources, it is estimated that roughly 145 postsecondary institutions in New York State either have granted credit or have a policy to grant credit for noncollegiate sponsored instruction based on the recommendations made by the Office on Noncollegiate Sponsored Instruction.

The Department also is involved in a number of activities that provide information to adults on educational and career opportunities in the State. The Volunteer Advisory Network, housed in the offices of the Regents External Degree Program, provides information on traditional and non-traditional postsecondary educational opportunities available throughout the State to adults and others interested in continuing their education. Each year the network provides advice to about 10,000 New Yorkers. Most of the 180 advisors are faculty and staff of colleges and universities, but some work at BOCES, hospitals, and public libraries.

The Education Information Centers program provides information, referral, and advisement to adults on education and career-related topics. Pilot centers have been established in seven libraries across the State. Specially trained librarians and, in some locations, career counselors, assist adults in the search for educational and employment opportunities. The centers are making special efforts to assist learners in rural areas, out-of-school youth, the elderly, and minorities.

The Regents and the Department are also involved in long-range planning for adult education. The Commissioner's Statewide Advisory Council on Adult Learning Services developed a statement of goals for adult education in the State for the year 2000. The year 2000 was chosen as the target date because it was felt that the year was close enough for people to believe they could influence events but far enough away to allow time to bring about changes necessary to achieve the goals. The Council shared the goals with interested citizens across the State and incorporated many of their suggestions in the final goal statement. In December 1981, the Goals for Adult Learning Services were adopted by the Board of Regents. The Goals statement covered the following eight areas: (1) the public interest in adult learning, (2) the location of learning opportunities, (3) the time of learning, (4) the providers of adult learning, (5) information and guidance services, (6) quality control, (7) assessment of learning outcomes, and (8) financing adult learning. The statement provides a framework for the development of adult learning in the State for the next two decades.

In 1981 and 1982 the Regents sponsored a package of adult learning legislation, including two bills related to postsecondary education. One bill would provide for the improvement and expansion of the system of education information centers. The other bill would extend eligibility for the Tuition Assistance Program, now available only to full-time students, to certain part-time undergraduates. The Regents proposal for "part-time TAP" would only be available to students who had completed at least three quarters of the credits required for an undergraduate degree (45 credits toward the associate degree or 90 credits toward the bachelor's degree), who were currently enrolled for at least six credit hours, and who also qualified on the basis of need. These two Regents legislative proposals are designed to address two major barriers to adult learning — lack of information and costs.

Table 38

COMPARISONS OF EDUCATIONAL ATTAINMENT OF ADULTS IN NEW YORK STATE AND THE NATION AGES 25 AND OLDER 1940-1981

	Year								
								Ages 25-44	
	1940	1950	1960	1970	1975[1]	1978[1]	1981[2]	1978	1981
	Percentage of Age Group Having 4 Years of High School or 4 Years of High School and 1-3 Years of College (The Undergraduate Population Pool)								
New York State	17.4%	27.2%	31.9%	40.5%	46.2%	49.8%	51.3%	58.2%	58.6%
United States	19.5%	27.3%	33.4%	41.8%	48.7%	50.2%	52.6%	58.8%	60.4%
	Percentage of Age Group Having 4 or more Years of College (The Graduate Population Pool)								
New York State	5.5%	7.4%	8.9%	11.8%	16.6%	16.2%	17.8%	22.1%	24.9%
United States	4.6%	6.0%	7.7%	10.7%	13.9%	15.7%	17.1%	21.4%	22.5%
	Percentage of Age Group Having at Least 4 Years of High School								
New York State	22.9%	34.6%	40.8%	52.3%	62.8%	66.0%	69.0%	80.3%	83.4%
United States	24.1%	33.3%	41.1%	52.5%	62.6%	65.9%	69.7%	80.2%	82.9%

[1] Employed characteristics of population found in the 1970 census to inflate sample data.

[2] Employed characteristics of population found in the 1980 census to inflate sample data.

Source: U.S. Bureau of the Census:
Census of the Population, 1940, 1950, 1960, and 1970.
Current Population Surveys, 1975, 1978, and 1981 (Data for 1981, unpublished).

Table 37

AGE DISTRIBUTION[1] BY LEVEL OF STUDY,
FULL-TIME, PART-TIME,
NEW YORK STATE
Preliminary
Fall 1981

	Under 19	20-24	25-29	30-34	35-44	45+	Total[2]
Full-time Undergrad.	43.0	43.9	6.3	3.2	2.5	1.1	588,581
Part-time Undergrad.	9.5	28.3	20.4	15.0	16.7	10.0	251,954
Full-time Graduate	1.3	34.3	32.5	16.1	11.8	3.9	46,908
Part-time Graduate	.3	16.5	31.6	21.4	20.8	9.4	97,812
Full-time 1st Prof.	1.8	57.4	30.1	6.5	3.2	.9	22,219
Part-time 1st Prof.	0	13.8	34.8	25.9	18.7	6.8	2,519

[1] Proportions were determined from enrollment data that excluded students of unknown age.

[2] Preliminary fall 1981 data.

Source: NYSED, Higher Education Data System, 1982

Table 38

ADULT PARTICIPATION IN UNDERGRADUATE AND GRADUATE EDUCATION
Fall 1981

Age Groups	Undergraduate Education: Estimated[1] Enrollment	Undergraduate Education: Population Pool (Individuals with 4 years of high school or 4 years of high school and 1-3 years of college)	Undergraduate Education: Participation Rate	Graduate Education: Estimated[1] Enrollment	Graduate Education: Population Pool (Individuals with 4 or more years of college)	Graduate Education: Participation Rate
		Full-time Undergraduate			Full-time Graduate	
25-29	35,866	830,000	4.3%	15,267	316,000	4.8%
30-34	17,949	806,000	2.2%	7,571	400,000	1.9%
35-44	14,251	1,131,000	1.3%	5,527	459,000	1.2%
25-44	68,066	2,767,000	2.5%	28,365	1,175,000	2.4%
45-over	6,190	2,587,000	.2%	1,816	679,000	.3%
25-over	74,256	5,354,000	1.4%	30,181	1,854,000	1.6%
		Part-time Undergraduate			Part-time Graduate	
25-29	51,509	830,000	6.2%	30,913	316,000	9.8%
30-34	37,690	806,000	4.7%	20,928	400,000	5.2%
35-44	42,176	1,131,000	3.7%	20,365	459,000	4.4%
25-44	131,375	2,767,000	4.7%	72,206	1,175,000	6.1%
45-over	25,154	2,587,000	1.0%	9,230	679,000	1.4%
25-over	156,529	5,354,000	2.9%	81,436	1,854,000	4.4%
		Total Undergraduate			Total Graduate	
25-29	87,375	830,000	10.5%	46,180	316,000	14.6%
30-34	55,639	806,000	6.9%	28,499	400,000	7.1%
35-44	56,427	1,131,000	5.0%	25,892	459,000	5.6%
25-44	199,441	2,767,000	7.2%	100,571	1,175,000	8.6%
45-over	31,344	2,587,000	1.2%	11,046	679,000	1.6%
25-over	230,785	5,354,000	4.3%	111,617	1,854,000	6.0%

[1]Enrollment in each age group was estimated by applying the proportion of total enrollment of each student type in each age group, excluding students of unknown age, against total preliminary fall 1981 enrollment of each student type.

Source: 1981 Enrollment data from NYSED, Higher Education Data System, 1981 population pool data from U.S. Bureau of the Census - Current Population Survey, March 1981 (unpublished data).

Table 39

CHANGE IN ADULT PARTICIPATION RATES[1] 1978-1981

Level/Age Group	1978	1981	% Change
Full-Time Undergraduate			
25-34	3.0	3.3	+10.0
35-44	1.1	1.3	+18.2
44-over	.2	.2	0
25-over	1.2	1.4	+16.7
Part-Time Undergraduate			
25-34	5.2	5.5	+5.8
35-44	3.4	3.7	+8.8
45-over	.8	1.0	+25.0
25-over	2.7	2.9	+7.4
Total Undergraduate			
25-34	8.2	8.7	+6.1
35-44	4.4	5.0	+13.6
45-over	1.0	1.2	+20.0
25-over	3.9	4.3	+10.3
Full-Time Graduate			
25-34	3.9	3.2	-17.9
35-44	1.2	1.2	0
45-over	.3	.3	0
25-over	1.8	1.6	-11.1
Part-Time Graduate			
25-34	9.1	7.2	-20.9
35-44	4.4	4.4	0
45-over	1.2	1.4	+16.7
25-over	4.8	4.4	-8.3
Total Graduate			
25-34	13.0	10.4	-20.0
35-44	5.6	5.6	0
45-over	1.5	1.6	+6.7
25-over	6.6	6.0	-9.1

[1] Adult participation rates were determined by dividing adult enrollment by age group by the population eligible for that enrollment by age group.

Source: Population data from U.S. Bureau of the Census: Current Population Surveys 1978 and 1981 (Data for 1981, unpublished).
Enrollment data from NYSED, Higher Education Data System.

Participation by Members of Minority Groups

Objective 8 in the 1980 Plan stated:

> By 1990 the proportion of degrees awarded in New York State to members of minority groups at each degree level — associate, baccalaureate, master's, doctoral, and first-professional — will increase more than the proportion of minorities in the State's population increases.

In the Plan, the Regents said that this objective is "interim. In the long run, the objective is that minority group members earn approximately the same proportion of degrees at all levels as their proportion in the population."

Tables 40 and 41, below, show degrees conferred, by level of study, by ethnic category, in 1976-77 and 1978-79, in terms of numbers and in terms of proportions of all degrees conferred at that level. For blacks, there was a slight increase over that period in the proportion of all associate, baccalaureate, and master's degrees conferred, but a decline in the proportion of first-professional and doctoral degrees conferred. Hispanics had small increases in the proportion of associate degrees and of doctorates conferred, but decreases in the proportions of bachelor's, master's, and first-professional degrees conferred during this period. For all other minorities, decreases in the proportion of degrees conferred were seen at all levels except the baccalaureate, which saw an increase, and the doctoral, which saw no change.

An analysis of minority participation would not be complete without some understanding of the differences in high school retention rates for various ethnic groups. Table 42, displays the racial/ethnic distribution of one cohort of pupils in the State's public high schools for 1977-80. (This is not a true cohort, since in-transfers are not excluded.) The table shows the differences in the rates at which blacks, Hispanics, American Indians and Alaskan Natives, Asian and Pacific Islanders, and whites progress from ninth to twelfth grade. Out of 300,000 ninth graders in 1977, 208,000 or 69 percent, continued on to twelfth grade in 1980. When this percentage is broken down by racial-ethnic group, the picture is dramatic. Eighty-one percent of whites, 56 percent of American Indians and Alaskan Natives, 46 percent of blacks, and 36 percent of Hispanics continued on to the twelfth grade.

In 1977, the ethnic composition of the ninth grade class was as follows: 67 percent white, 19 percent black, 18 percent Hispanic, 1 percent Asian and Pacific Islander, and less than 1 percent American Indian and Alaskan Native. In 1980, in the twelfth grade, the distribution of this same high school class was 79 percent white, 13 percent black, 6 percent Hispanic, 2 percent Asian and Pacific Islander, and less than 1 percent American Indian and Alaskan Native. If this pattern continues in the future; it will be even more difficult to achieve the goal of equal access for minorities than if all racial ethnic groups had the same high school graduation rates.

Table 10
TOTAL DEGREES CONFERRED BY RACIAL/ETHNIC CATEGORY IN NEW YORK STATE
1976-77 and 1978-79

	Associate		Baccalaureate		First Professional		Master's		Doctoral		Total Degrees	
	1976-77	1978-79	1976-77	1978-79	1976-77	1978-79	1976-77	1978-79	1976-77	1978-79	1976-77	1978-79
Black, Non-Hispanic	4,330	4,296	5,808	6,485	202	211	1,884	2,140	104	106	12,328	13,238
Men	1,612	1,503	2,459	2,403	124	109	780	792	59	54	5,034	4,861
Women	2,718	2,793	3,349	4,082	78	102	1,104	1,348	45	52	7,294	8,377
Hispanic	2,079	1,996	2,749	2,569	94	89	1,178	847	64	86	6,164	5,587
Men	916	821	1,332	1,171	73	62	553	364	38	50	2,912	2,468
Women	1,163	1,175	1,417	1,398	21	27	625	483	26	36	3,252	3,119
Other Minorities	784	604	1,484	1,722	82	71	859	782	83	87	3,292	3,266
Men	389	309	824	911	58	44	497	476	65	66	1,833	1,806
Women	395	295	660	811	24	27	362	306	18	21	1,459	1,460
White, Non-Hispanic	39,058	36,532	68,680	66,573	4,876	5,757	27,026	25,454	2,430	2,570	142,070	136,886
Men	19,317	17,143	35,997	33,591	3,839	4,138	12,566	11,655	1,685	1,655	73,404	68,182
Women	19,741	19,389	32,683	32,982	1,037	1,619	14,460	13,799	745	915	68,666	68,704
Non-resident Alien	225	199	1,397	1,501	39	42	2,295	2,437	423	450	4,379	4,629
Men	121	103	930	1,045	33	32	1,705	1,709	359	372	3,148	3,261
Women	104	96	467	456	6	10	590	728	64	78	1,231	1,368
Total Excluding Unknown	46,476	43,627	80,118	78,850	5,293	6,170	33,242	31,660	3,104	3,299	168,233	163,606
Men	22,355	19,879	41,542	39,121	4,127	4,385	16,101	14,996	2,206	2,197	86,331	80,578
Women	24,121	23,748	38,576	39,727	1,166	1,785	17,141	16,664	898	1,102	81,902	83,028
Unknown Ethnicity	2,769	4,932	6,721	6,751	192	96	4,532	2,078	371	99	14,585	13,956
Men	1,764	2,872	3,793	4,137	147	76	2,177	959	255	59	8,136	8,103
Women	1,005	2,060	2,928	2,614	45	20	2,355	1,119	116	40	6,449	5,853
State Total	49,245	48,559	86,839	85,601	5,485	6,266	37,774	33,738	3,104	3,398	182,818	177,562
Men	24,119	22,751	45,335	43,258	4,274	4,461	18,278	15,955	2,206	2,256	94,467	88,681
Women	25,126	25,808	41,504	42,343	1,211	1,805	19,496	17,783	898	1,142	38,351	88,881

Source: NYSED, Office of Postsecondary Research, Information Systems and Institutional Aid, 1982.

Table 41

PERCENT OF TOTAL DEGREES CONFERRED BY RACIAL/ETHNIC CATEGORY IN NEW YORK STATE
1976-77 and 1978-79

	Associate		Baccalaureate		First-professional		Master's		Doctoral		Total Degrees	
	1976-77	1978-79	1976-77	1978-79	1976-77	1978-79	1976-77	1978-79	1976-77	1978-79	1976-77	1978-79
Black, Non-Hispanic	9.3	9.8	7.3	8.2	3.8	3.4	5.7	6.8	3.3	3.2	7.3	8.1
Men	3.5	3.4	3.1	3.0	2.4	1.8	2.4	2.5	2.1	1.6	3.0	3.0
Women	5.8	6.4	4.2	5.2	1.4	1.7	3.3	4.3	0.9	1.6	4.3	5.1
Hispanic	4.5	4.6	3.4	3.3	1.8	1.4	3.5	2.7	2.1	2.6	3.7	3.4
Men	2.0	1.9	1.6	1.5	1.4	1.0	1.6	1.1	1.2	1.5	1.7	1.5
Women	2.5	2.7	1.8	1.8	0.4	0.4	1.9	1.5	0.9	1.1	2.0	1.9
Other Minorities	1.7	1.4	1.9	2.2	1.6	1.1	2.6	2.5	2.7	2.7	2.0	2.0
Men	0.8	0.7	1.1	1.1	1.1	0.7	1.5	1.5	2.1	2.0	1.1	1.1
Women	0.9	0.7	0.8	1.1	0.5	0.5	1.1	0.9	0.6	0.7	0.9	0.9
White, Non-Hispanic	84.0	83.7	85.7	84.4	92.1	93.3	81.3	80.4	78.3	77.9	84.4	83.7
Men	41.5	39.3	44.9	42.6	72.5	67.1	37.8	36.8	54.3	50.2	43.6	41.7
Women	42.5	44.4	40.8	41.8	19.6	26.2	43.5	43.6	24.0	27.7	40.8	42.0
Non-resident Alien	0.5	0.5	1.7	1.9	0.7	0.7	6.9	7.7	13.6	13.6	2.6	2.8
Men	0.3	0.2	1.1	1.3	0.6	0.5	5.1	5.4	11.6	11.3	1.9	2.0
Women	0.2	0.2	0.6	0.6	0.1	0.2	1.8	2.3	2.0	2.4	0.7	0.8
Total Excluding Unknown	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Men	48.1	45.6	51.8	49.6	78.0	71.1	48.4	47.4	71.1	66.6	51.3	49.3
Women	51.9	54.4	48.2	50.4	22.0	28.9	51.6	52.6	28.9	33.4	48.7	50.7
Unknown Ethnicity	5.6	10.2	7.7	7.9	3.5	1.5	12.0	6.2	10.7	2.9	8.0	7.9
Men	3.6	5.9	4.4	4.8	2.7	1.2	5.8	2.8	7.4	1.7	4.5	4.6
Women	2.0	4.2	3.3	3.1	0.8	0.3	6.2	3.3	3.3	1.2	3.5	3.3
State Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Men	49.0	46.9	52.2	50.5	77.9	71.2	48.4	47.3	70.8	66.4	51.7	49.9
Women	51.0	53.1	47.8	49.5	22.1	28.8	51.6	52.7	29.2	33.6	48.3	50.1

Source: NYSED, Office of Postsecondary Research, Information Systems and Institutional Aid, 1982.

Table 42

Distribution of One Class Year of Students in New York's Public High Schools
by Ethnicity, 1977-80

	Total Students	American Indian & Alaskan Native	Black	Asian and Pacific Islander	Hispanic	White
1977 - Grade 9						
Number	301,127	668	58,187	3,417	35,234	203,621
% Distribution	--	0.2	19.3	1.1	11.7	67.6
1978 - Grade 10						
Number	284,319	516	52,838	3,861	30,976	196,128
% Distribution	--	0.2	18.6	1.4	10.9	69.0
% Remaining	94.4	77.2	90.8	--	87.9	96.3
1979 - Grade 11						
Number	240,935	437	38,218	3,945	19,500	178,295
% Distribution	--	0.2	15.9	1.6	8.1	74.2
% Remaining	79.8	65.4	65.7	--	55.3	87.6
1980 - Grade 12						
Number	207,942	373	26,905	3,383	12,629	164,652
% Distribution	--	0.2	12.9	1.6	6.1	79.2
% Remaining	69.1	55.8	46.2	--	35.8	80.9

Source: NYSED, Information Center on Education and Bureau of Higher Education Opportunity Programs, 1982.

Note: These are not true cohort data, as transfers in and out are included in the figure. Of the 207,942 12th graders in Fall 1980,198,465 graduated in June 1981.

Participation of Minorities in the Professions

Numbers of minority practitioners in three prestigious professions — medicine, dentistry, and law — are frequently used as indices of the extent to which racial-ethnic minorities have gained access to the professions in general. This is admittedly a limited approach, since professions and occupations in which significant progress toward minority participation is being made, for example education and business, may be overlooked. This measure is used here, therefore, only as a broad measure of social change and economic opportunity in the context of higher and professional education.

Data are available, for both New York State and the nation, to assess the extent to which minorities have access to these prestigious professions. For New Yorkers these include: recent reports of surveys of physicians and dentists conducted by the Education Department; the Health Planning Commission report to the Governor, Minorities in Medical Education; certain data available on the Department's Higher Education Data System (HEDS), e.g., first-professional degrees granted by race. And for the nation as a whole: tabulations, based on the vast data base of the American Medical Association, frequently found in the annual "Medical Education in the United States" issue of the Journal of the AMA; annual reports of both the American Dental Association (ADA) and the American Association of Dental Schools (AADS); the annual Review of Legal Education in the United States of the American Bar Association (ABA); and the study reports on medical manpower produced with great frequency by public agencies and foundations in recent years, the most recent and by far the best known being the 1980 report of the Graduate Medical Education National Advisory Committee (GMENAC).

Medicine

Substantial Federal and foundation funding became available in the early 1970's to pay for some of the educational and other support services necessary to expand minority enrollment and retention. For example, a task force of the Association of American Medical Colleges (AAMC) reporting in 1970 called for an increase in minority medical school enrollments to 12 percent by 1975. Its study, financed by the Sloan Foundation, identified increased student aid as the most important single factor in improved minority access to medical education. In this climate medical and dental schools developed recruitment, admission, and support programs to increase minority enrollment and completion.

Indeed, rapid progress was made, as shown in the following tables for medical and dental education at the national and State levels, with minority gains peaking at about the mid-1970's. Medical education did not achieve the AAMC objective of 12 percent, but by 1975 minority enrollments had more than doubled nationally and almost doubled in this State.

A survey by the Education Department of New York-licensed physicians in late 1980 indicated that at that time 82 percent of MD's located in-state were white/Caucasian. The largest minority group was Asian or Pacific Islander, 13 percent of the respondents. Only about 4 percent of the State's physicians were members of what are generally referred to as "disadvantaged minority groups," i.e., black (2.4 percent), Hispanic (1.6 percent), or American Indian (0.1 percent). Analysis of data concerning age of practitioners responding to the survey suggests that Asians have been achieving greater access to medicine in recent decades, but it is possible that such gains may be more reflections of preferential immigration policies of the 1950's and 1960's than of social progress. At the same time, the survey shows that access had increased for blacks and Hispanics. The figures also show (in terms of physicians by race by date of graduation from medical school) that progress is

being achieved slowly (See Table 43). Ideally, the survey would have shown that the proportions of minority physicians are approximately the same as the proportions of minorities in the general population. In fact, while there are 203 physicians per 100,000 people in the State, there are only 32 black physicians per 100,000 black population, and 31 Hispanic physicians per 100,000 Hispanic population.

Governor Carey, in his 1982 annual message to the Legislature on health, scored the underrepresentation of minorities in all of the State's health professions, but particularly in medicine. The Governor was in part responding to a newly-released report of the Health Planning Commission critical of progress made by most of the medical schools in the State towards recruitment of minority students. Table 44 shows data from this report, and also comparable data for schools of dentistry. To help deal with this situation the Governor established a Blue Ribbon Commission on Minorities in Medical School which is scheduled to provide recommendations by the fall of 1982.

For purposes of comparison, AMA data for 1980-81 show that nationally, of a total medical school enrollment of 65,338, 8,569 or 13 percent were members of racial-ethnic minorities, in contrast to the comparable statistic of 5.2 percent (358) of the 6,919 students in the 12 New York medical schools.

Dentistry

Ninety-three percent of New York-licensed dentists located in-state, who responded to the Education Department's 1980 survey (10,426) and who answered the question on race, are white. The largest minority group is Asian or Pacific Islander, 2.4 percent of the respondents. About 3.5 percent are members of the disadvantaged minorities , black (2 percent), Hispanic (1.2 percent), American Indian (0.3 percent).

Data from the ADA for 1980-81 show that nationally, of a total dental school enrollment of 22,842, 2,627 or 11.5 percent, were members of racial-ethnic minorities, in contrast to 4.4 percent (65) of the 1,489 students in New York's four dental schools.

Law

The American Bar Association has long been concerned with minority participation in the legal profession and with minority enrollment in and graduation from law schools. Recent ABA data (1979-80) show that 8 percent of law students nationally are members of minority groups, compared with about 6 percent in New York State; and 8 percent of law school graduates nationally are members of minority groups, compared with 5 percent in this State.

The differences between the national and State proportions in these professions is attributable in part to the fact that several predominantly black institutions (e.g. Meharry, Howard) are included in the national figures. The small proportion of public medical schools (with relatively low student charges) in the State may also contribute. This suggests that New York is closer to the U.S. average than the raw statistics indicate, although it certainly does not eliminate concern about the situation.

Recent and Pending Legislation

The most significant recent State legislation related to minority access to the professions is Chapter 856 of the Laws of 1981. This act authorized contracts between the Commissioner of Education and Meharry Medical College (Nashville), the medical school at Morehouse College (Atlanta), and the medical school of the University of Puerto Rico to

provide additional places reserved for disadvantaged and minority New York students who wish to study medicine (and, in the case of Meharry, also dentistry). At the present time about 15 such places have been provided, with the three schools ultimately to enroll about 37 new students each year. Upon completion of training each of these physicians is required to practice in New York physician shortage areas for at least three years. There is concern in some circles that these programs may be making more difficult the task of increasing minority enrollments in New York institutions, even as they provide for improved access for New Yorkers of minority or disadvantaged background.

Two bills introduced into the Legislature at the request of the Regents, on which action has yet to be taken, would (1) establish summer career awareness and skill-building programs for disadvantaged but potentially able high school students and (2) increase the science and mathematics skills of disadvantaged college students. These bills do not specify professions, but imply the major ones in their emphasis on counseling, testing, and tutoring.

Table 43

PHYSICIAN MANPOWER SURVEY 1980-81

Color or Race; Year of Medical School Graduation

Color or Race	Year of Graduation																	
	Before 1920		1920-29		1930-39		1940-49		1950-59		1960-69		After 1969		Non-response		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
White	85	90.4	939	98.5	3,551	98.2	4,208	94.7	5,558	84.9	4,979	64.3	6,438	80.6	619	76.6	26,377	81.9
Black	1	1.1	7	0.7	32	0.9	67	1.5	155	2.4	207	2.7	280	3.5	30	3.7	779	2.4
Am. Indian	-	-	-	-	-	-	1	0.0	4	0.1	6	0.1	8	0.1	1	0.1	20	0.1
Asian/Pacific	5	5.3	3	0.3	25	0.7	117	2.6	641	9.8	2,264	29.2	1,034	12.9	136	16.8	4,225	13.1
Hispanic	2	2.1	2	0.2	7	0.2	45	1.0	140	2.1	169	2.2	142	1.8	12	1.5	519	1.6
Other	1	1.1	2	0.2	3	0.1	8	0.2	46	0.7	118	1.5	91	1.1	10	1.2	279	0.9
Non-response	10	-	72	-	198	-	351	-	637	-	918	-	1,000	-	167	-	3,353	-
Total	104	100.0	1,025	100.0	3,816	100.0	4,797	100.0	7,181	100.0	8,661	100.0	8,993	100.0	975	100.0	35,552	100.0

Source: NYSED, Office of Postsecondary Research, Information Systems and Institutional Aid, 1982

Table 44

MINORITY AND TOTAL ENROLLMENT
MEDICAL AND DENTAL SCHOOLS IN NEW YORK STATE
1980-81

Medical Schools[1]	Enrollments		
	Minority	Total	% Minority
Albany Medical	9	514	1.8
Columbia	31	594	5.2
Cornell	49	443	11.0
Einstein	23	721	3.2
Mt. Sinai	36	454	7.9
New York Medical	41	758	5.4
New York University	32	708	4.5
Rochester	10	402	2.5
SUNY Buffalo	41	564	7.3
Downstate	41	900	4.6
Stony Brook	23	265	8.7
Upstate	22	596	3.7

Dental Schools[2]	Minority	Total	% Minority
Columbia	11	224	4.9
New York University	35	810	4.3
SUNY Buffalo	15	352	4.3
Stony Brook	4	103	3.8

[1] Minorities in Medical Schools. NYS Health Planning Commission, February 1982. Table 4.

[2] Annual Report on Dental Education 1980-81. Supplement II. American Dental Association. Tables 8, 14.

Chapter 6

SUMMARIES OF SECTOR PROGRESS REPORTS

Reports of progress in meeting the goals they set in their 1980 master plans, and in meeting the objectives set by the Regents in the 1980 Statewide Plan, have been prepared by The City University of New York, the State University of New York, and each independent institution, including non-profit and proprietary institutions authorized by the Regents to grant degrees in specific programs. The Commission on Independent Colleges and Universities has prepared a consolidated progress report for the independent sector based on the progress reports of its member institutions.

The following material summarizes the 1982 progress reports of The City University of New York, the Commission on Independent Colleges and Universities, and the State University of New York. These summaries were prepared by the Education Department. The inclusion of these summaries in no way implies approval by the Regents of any proposal, resolution, language, or apparent bias in those reports.

In general, these summaries refer to aspects of the sector progress reports which have not been incorporated into the main body of the Regents 1982 Progress Report.

Summary of the 1982 Progress Report of The City University of New York

Since 1980, when The City University of New York submitted its master plan to the Regents, the University has experienced a welcome period of budgetary and enrollment stability. The University characterizes this period as one of consolidation, management improvements, and progress on academic initiatives.

Major developments have included a change in the funding base for The College of Staten Island and New York City Technical College (formerly New York City Community College), progress on construction and rehabilitation projects, and the establishment of more than 30 new academic programs.

Enrollment

Recent enrollment has been relatively stable. In the future, enrollment levels are likely to be affected both by the decline of New York City high school graduates and by changes in Federal financial aid policies. The University projects a three to six percent decline in total enrollments between 1981 and 1988. This projection for 1988 is three percent higher than was projected for 1988 two years ago. To improve student retention, the Chancellor has appointed a task force of presidents to study issues related to retention and attrition.

Student Enrollment, Faculty Resources, and the Academic Plan

City University has instituted an academic planning process to examine each unit in terms of its enrollment patterns, instructional needs, and individual strengths. This planning process is expected to lead to sharpening of academic missions and reduction of unnecessary duplication. The University does not expect major shifts in curricular emphasis in the immediate future.

Basic Skills Development

City University has committed significant resources to the basic skills since 1970; some of its programs have received national recognition. These efforts in assessment of reading, writing, and mathematics are discussed elsewhere in this report.

Other University Concerns

Among other key issues addressed by the University over the past two years are financial aid, special programs, articulation with elementary and secondary schools, teacher education, cooperation with business and labor, facilities, and cost-effectiveness.

Special Programs

New guidelines adopted in 1978 for the structure and operation of the SEEK program have been useful. Major studies of retention and dropout patterns of SEEK and non-SEEK students, and of remediation, are soon to be completed. A review of counselor effectiveness is also under way.

Cooperation with Elementary and Secondary Schools

The City University is involved with the Board of Education in a variety of cooperative programs, including curriculum development, workshops for teachers, and specialized classes for school children. One rapidly expanding program makes preparation for the general education diploma (GED) available in all boroughs at six colleges. The Urban Projects program identifies tenth-grade students with potential for science and math-based careers, and provides opportunities for exploration of those interests.

Teacher Education

City University is making efforts to recruit both high school students and college undergraduates into teaching careers. The University has also taken steps to strengthen its programs of in-service education, designed to meet the needs of teachers in the field.

Cooperation with Business and Labor

Programs in this area include contract courses for employers or employee associations, and the Center for Worker Education of The City College, which provides baccalaureate level education for members of labor unions in the city at a union headquarters.

Facilities

In addition to making progress on several construction and rehabilitation projects, City University has had very successful results in developing mechanisms for saving energy through computerized monitoring of heating and cooling and the institution of an extended hours, four-day work week in the summer. Long-term rental costs have been sharply reduced by reductions in the use of leased facilities.

Cost Effectiveness

The University has prepared a proposal for the creation of an inventory of scientific and other equipment. It is also developing a new financial information system to improve cost analysis and ease reporting.

Summary of the 1982 Progress Report of the Commission on Independent Colleges and Universities

The 1982 Progress Report for the independent sector as a whole was compiled by the Commission on Independent Colleges and Universities (CICU). This report summarized data for some 70 of the State's 136 independent institutions.

In its progress report, CICU called for revision of the master planning process so that it would address more directly the vital current issues related to resource allocation. In order for master planning to be used more effectively in decision-making by institutional planners and those shaping public policy, the Commission suggested that the Education Department improve its reporting of data on such matters as faculty and equipment resources as compared with those of five or 10 years ago and with those in other states.

The Department had asked institutions and sectors to outline in their 1982 Progress Reports the progress which had been on 10 specific matters of statewide concern. The information submitted by CICU in nine of these areas is summarized elsewhere in this report: communication skills, quantitative skills, student retention, library facilities, teacher preparation, articulation, cooperation with business and labor, cost effectiveness, and interinstitutional cooperation. Regarding the tenth issue, use by institutions of measurable standards for evaluating success in carrying out their missions and recommendation of measurable standards suitable for aggregate use statewide, the Commission on Independent Colleges and Universities reported some concern on the part of independent institutions regarding what they perceived as a move toward standardized measures of institutional performance. Citing the great diversity of postsecondary institutions in the State, CICU questioned whether such standards could be formulated and, if so, whether they might work against that desirable diversity. With that caveat, however, independent institutions were reported to welcome the call for self-evaluation aimed at critical analysis of institutional standards; a number of such standards were listed under the headings of specific changes which would alter enrollment forecasts; students' expectations for educational accomplishment; characteristics of admitted students; resources available per student; programs for adults and for disadvantaged; faculty and program evaluation; and assessment of outcomes (student success and achievement).

The report summed up data and projections provided by independent institutions under the six basic headings requested by the Department:

(1) Planned programs of study.

The 70 responding institutions reported plans to establish 297 new degree programs between 1981 and 1984, and 131 now planned for introduction between 1984 and 1988. The largest number were planned for both periods in the major-mission fields of business and management, computer and information science, health professions, and public affairs and services.

(2) Fall Degree-credit Enrollment, 1981-1988.

Enrollment data for fall 1981 and projections for fall 1984 and fall 1988 were provided by 73 institutions.

	Percent change	
	Fall 1981-Fall 1984	Fall 1981-Fall 1988
Total enrollment	+0.5	-3.0 to +3.0
Full-time enrollment	-1.7	-6.0 to +0.6
Part-time enrollment	+4.4	+3.0 to +9.0

(3) Faculty by type of employment and tenure status.

Data and projections were provided by 73 institutions.

	Percent change	
Type/status	1981-1984	1981-1988
Total	+0.8	+1.6
Full-time	+2.6	+2.9
Tenured	+4.8	+8.6
Nontenured	+0.4	-3.0
Part-time	-0.9	+0.3

(4) (a) Annual current funds revenues, by source.

Information for 68 institutions was summarized for tuition and fees and total revenues:

	Percent change	
	1980-81 to 1984-85	1980-81 to 1988-89
Tuition and fees	+51	+102
Total revenues	+37	+80

The largest tuition-and-fees revenue increases were projected by multiversities and engineering-technical institutions; the smallest, by college complexes and "two-year, other" institutions. Projected increases in tuition and fees ranged from 29 percent to 69 percent by 1984-85, and from 61 percent to 135 percent by 1988-89. In each period, tuition and fees revenues are projected to increase by a larger percentage then total revenues.

(4) (b) Annual current funds expenditures and mandatory transfers.

Expenditures and mandatory transfers were projected by 67 institutions. Total educational and general expenditures and mandatory transfers were projected as follows:*

Institutional type	Percent change 1980-81 to 1984-85	Percent change 1980-81 to 1988-89
All	+40	+82
Engineering-technical (largest projected increases)	+58	+122
Health science centers	+20	+48
Two-year, other (smallest projected increases)	+32	+64

*Does not include expenditures for auxiliary enterprises, hospitals, and independent operations.

(5) Student Charges.

As reported and projected by 60 institutions, total undergraduate charges may be summarized as follows:

Institutional type	Percent change 1981-1984	Percent change 1981-1988
Multiversities	+40	+98
Universities	+31	+88
College complexes	+41	88
Colleges	+35	+89
Engineering-Technical	+44	+96
Specialized	+20	+39
*Health service centers	—	—
*Two-year nursing	—	—
Two-year, other	+30	+65

*Insufficient data available.

(6) Actual and projected facilities requirements.

The report summarized figures furnished by 71 institutions on total assignable square feet in use in 1981 and projected for 1984 and 1988. The institutions projected increases in assignable square feet of 5 percent by 1984 and 8 percent by 1988.

Summary of the 1982 Progress Report
of State University of New York

The 1980 Master Plan of the State University of New York was prepared at a time of fiscal uncertainty. Therefore, several recommendations in the Plan concerned ways to effectively budget available resources to address this issue. State University has developed the multiphase rolling plan, which has as its goal the consolidation of planning and budgeting. According to the University, the process has permitted Central Administration to perform a more comprehensive analysis of campus plans and budgets; it has permitted State University to evaluate program needs and resource requirements from a system-wide perspective. State University stated that among the projects flowing from the multiphase rolling plan was a study, "Investment Needs: Engineering and Engineering Technologies," in which it examined the need for additional engineering and engineering technology programs in the State. The report provided a framework for campus master plan amendments and identified those SUNY campuses where expansion of existing programs and introduction of additional programs in engineering and engineering technology should take place.

State University recommended in its 1980 Master Plan the development of improved, flexible funding formulas for public higher education. As part of the budget process, State University is reviewing funding formulas to develop one that allows greater flexibility to meet new needs. A major change in the funding formula for community colleges was recommended as part of State University's 1982-83 budget request.

In its 1980 Plan, State University recommended an improvement in the budgetary input ratios. One important feature of the multiphase rolling plan is to refine budgetary support indicators. Several tentative models for functional areas, including instruction and departmental research, student services, and maintenance and operation of plant, have been developed. Limited use of the formulas has begun.

In the area of cost savings, State University recommended in its 1980 Master Plan an examination of State regulations that affect University operations. Some steps have been taken in this area. State University has discussed with the State Education Department the impact of regulations relating to branch campuses and extension centers and to the ratio of full-time to part-time faculty in its programs. In June 1982, the Regents changed the regulation relating to the ratio of full-time to part-time faculty. Following a pilot project on pre-audit of student financial aid refunds, State University and the Department of Audit and Control have agreed to a joint study of the delivery system of financial aid.

In its 1980 Master Plan, State University recommended a program of industrial liaison to be implemented through its Research Foundation. The program, designed to enable industrial firms and the State University to function as partners in technological transfer, has been established. Among other activities, the Program on Industrial Liaison has scheduled meetings between corporate representatives and faculty members to provide companies direct and convenient access to SUNY education and research programs, has assisted in the compilation of directories of current campus research activities, and has assisted in the presentation of symoposia on issues related to technological research.

In its 1980 Master Plan, State University recommended that outcome measures of excellence be increasingly relied upon in addition to the traditional measures of input in monitoring the quality of its academic programs. Although no output measures have been mandated, all campuses have been asked to consider instituting output measures for student personal and intellectual development, student placement in upper-division and graduate programs, student placement and advancement in employment situations, and faculty production of original research, among other areas.

In its 1980 Master Plan, State University recommended a continued effort to identify and respond to lifelong needs for learning. All campuses have been involved in identifying adjustments necessary to serve adult learners. A University-wide council, the Lifelong Learning Academic Review and Coordinating Council, has been established. Related to this recommendation, State University stated in its 1982 Progress Report a continuing policy to promote educational programs and research projects in the field of geriatrics and gerontology, and through its health science program, State University stated that it will continue to offer care and services designed to meet geriatric problems.

In its 1982 Progress Report, State University revised its enrollment targets. It projects enrollment increases at the State-operated institutions and at the community colleges above targets set forth in its 1980 Master Plan. The University estimates the full-time equivalent student enrollment ranges indicated below for the State-operated campuses:

1980-81	1984-85	1988-89
169,464	165-169,000	165-169,000

and the full-time equivalent enrollment ranges indicated below for the community colleges:

1980-81	1984-85	1988-89
127,000	132-136,000	133-137,000

According to State University, the full-time equivalent targets at State-operated campuses show heavy dependence on the growth of part-time enrollment. State University stated that it expects enrollment at community colleges to continue to increase because of the demand on the part of part-time students for an inexpensive college-level education.

Appendix A

GOALS AND OBJECTIVES IN THE 1980 PLAN

Goal: A. **EXCELLENCE.** TO PROMOTE AND MAINTAIN ACADEMIC FREEDOM AND RESPONSIBILITY AND HIGH QUALITY IN ALL ENDEAVORS OF EACH INSTITUTION, WHATEVER ITS MISSION, AND OF THE POSTSECONDARY SYSTEM AS A WHOLE.

Governor's Action (see Appendix B)

Objectives:

1. By 1990 the quality of education in New York's postsecondary institutions will be improved, as indicated by the level of student skills and knowledge demonstrated on performance measures developed or selected by the institutions.

   Accepted with understanding

2. By 1990, in the aggregate, the proportion of students completing degree programs in New York's postsecondary institutions will be improved:

   a) in comparison with the proportion completing programs in 1980, and

   b) in relation to the proportion completing programs in other states, as measured by the ratio of degrees awarded in one year to freshman enrollment two and four years earlier.

   Accepted with reservation

3. By 1990 the quality of education offered by postsecondary institutions in New York will be improved, as evidenced by their graduates' record of job placement and admission to more advanced levels of study and as measured by the institutions.

   Accepted as noted

a) For certificate and associate degree programs, the proportions of occupational graduates placed in related jobs and of liberal arts students and graduates who transfer to baccalaureate programs will increase.

b) For baccalaureate programs, the proportions of graduates admitted to graduate and professional programs or placed in jobs related to their undergraduate programs of study will improve.

c) For graduate programs, the proportion of doctoral degree-holders placed in academic or non-academic positions broadly related to their educations will improve.

4. By 1990 the quality of New York's colleges and universities will be improved, relative to the rest of the Nation, by the following measures of student choice:

Accepted in principle

a) New York will advance its position in the ranking of states by the proportion of students attracted from other states and abroad.

b) The proportions of National Merit Scholars and Westinghouse Scholars choosing to study in New York will increase.

c) The proportion of students offered Regents College Scholarships who accept those Scholarships to study at New York colleges and universities will increase.

5. By 1990 the amount and quality of research at New York's colleges and universities will increase to the point that:

Accepted with reservation

a) New York institutions will account, in the aggregate, for more than 10 percent of all college and university research expenditures in the United States, and

b) New York's leading research universities will hold or improve their national rankings in terms of research expenditures.

6. By 1990 the quality of instruction and research at New York's colleges and universities will be improved by the following improvements in academic support services:

Accepted with conditions

a) the library collections of New York (which represent one tenth of the academic library resources of the entire nation) will increase so that New York maintains its current leadership position among the states;

b) students, faculty, and other researchers in New York's colleges and universities will have total bibliographic access to all academic library resources in the State;

c) two-thirds of New York's colleges and universities will provide quality library user instruction for their students; and

d) all students will have access to computers, and training in their use, appropriate to their programs and levels of study.

See also Objective 7b.

Goal: B. ACCESS TO PROVIDE EQUAL OPPORTUNITY FOR POSTSECONDARY EDUCATION FOR ALL NEW YORKERS WITHOUT DISCRIMINATION ON ANY GROUNDS (INCLUDING AGE, RACE, SEX, CREED, NATIONAL ORIGIN, GEOGRAPHIC LOCATION, ECONOMIC STATUS, OR HANDICAPPING CONDITION), INCLUDING EQUAL OPPORTUNITY FOR ALL WHO ARE ADMITTED TO POSTSECONDARY INSTITUTIONS TO COMPLETE THE COURSES AND PROGRAMS IN WHICH THEY ARE ENROLLED.

Objectives:

7.	a)	By 1990 the participation rate of recent high school graduates in first-year college enrollment will exceed the rate for 1980.	Noted
	b)	By 1990 the educational attainment level of adults in New York State will significantly exceed the national mean.	
8.		By 1990 the proportion of degrees awarded in New York State to members of minority groups at each degree level —associate, baccalaureate, master's, doctoral, and first professional — will increase more than the proportion of minorities in the State's population increases.	Accepted

Goal: C. DIVERSITY. TO PRESERVE AND FOSTER A DIVERSITY OF INSTITUTIONS AND PROGRAMS SO THAT STUDENTS MAY CHOOSE AND STUDY IN THOSE APPROPRIATE TO THEIR NEEDS, INTERESTS, AND ABILITIES FROM A WIDE RANGE REFLECTING THE FULL DIVERSITY OF OUR STATE.

Objectives:

9.	In 1990 New York State will continue to have a balanced system of higher education with four strong and autonomous sectors—State University, City University, the independent sector, and the proprietary sector—coordinated through the master-planning process. Each of the three major sectors will include a mixture of open-admission and selective institutions at the undergraduate level.	**Accepted**
10.	By 1990, every collegiate-level training course or program offered in New York State by non-degree-granting organizations, (including companies, unions, and government agencies) will be appropriately linked to degree programs if the sponsor of the course or program wants such a linkage. Appropriate linkages may include listing of the course or program in the catalog of credit recommendations of the Regents Project on Noncollegiate Sponsored Instruction, formal integration of the courses into a registered program at a degree-granting institution, or agreement with a specific degree-granting institution to award credit for the courses within registered programs at the institution.	**Accepted as noted**

Goal: D. EFFECTIVE USE OF RESOURCES.
TO ACHIEVE THE MOST EFFECTIVE USE OF THE RESOURCES ALLOCATED TO POST-SECONDARY EDUCATION, CONSISTENT WITH THE STATE'S FISCAL CONDITION AND THE GOALS OF EXCELLENCE, ACCESS, AND DIVERSITY.

Objectives:

11.	If enrollment declines by 1990 as anticipated, the amount of State expenditures for higher education, adjusted for inflation, will be less in 1990 than in 1980, but the decrease in State expenditures will not be as large as the enrollment decline.	Not accepted
12.	By 1990 the amount of non-residential space in New York's postsecondary facilities will decrease, in comparison with 1980, but space will not decrease by as great a proportion as enrollment. The proportion of space judged to be in good condition will increase.	Not accepted
13.	By 1990, maximum use will be made of the resources of all types of libraries in New York State to support instruction and research in the colleges and universities.	Accepted

Appendix B

GOVERNOR'S ACTION ON THE REGENTS 1980 STATEWIDE PLAN AND RESPONSE BY THE REGENTS AND THE COMMISSIONER OF EDUCATION

RECEIVED
MAY 10 1982
COMMISSIONER
OF EDUCATION

STATE OF NEW YORK
EXECUTIVE CHAMBER
ALBANY 12224

HUGH L. CAREY
GOVERNOR

May 5, 1982

Honorable Willard A. Genrich
Chancellor
Ofc. of the Chancellor of
the Board of Regents
Education Department
Education Building
Albany, New York 12234

Honorable Gordon M. Ambach
Commissioner
Education Department
Education Building
Albany, New York 12234

Dear Chancellor Genrich and Commissioner Ambach:

The Regents Statewide Plan for the Development of Post-secondary Education 1980 has undergone extended review by staff of the Executive Chamber and the Division of the Budget. As part of this review, our respective staffs have held meetings designed to ensure that certain policy issues important to the future of our State are incorporated in the plan.

I am sure you will agree that the Statewide Plan should directly address the broad social and economic challenges facing New York State. Consequently, it must focus on the ways in which higher education can help meet the State's comprehensive needs while also addressing the legitimate but more narrow interests of the higher education community. In this respect, the 1980 Plan is an improvement over previous planning documents. The separation of the Plan into broad "goals", more detailed "objectives" and specific "activities" lends itself to appropriate definition of roles and, as such, will assist in making the 1980 Plan a more relevant and important document.

I will, in the course of this letter, make proposals which I feel will further improve the viability of the Plan within the context of broad State considerations.

As you point out in your transmittal letter, the master planning statute -- Section 237 of the Education Law -- requires the Regents to submit the master plan to me for approval and to the Legislature for information. In the past, the Plans have contained recommendations

which ranged from specific requests to vague generalities with gubernatorial action anticipated upon all. Your proposal has the effect of focusing gubernatorial action on "goals and objectives" -- broader categories appropriate to a multi-year plan. The plan further envisions that the "activities" necessary to either measure or implement those agreed-upon goals and objectives shall be determined by the post-secondary institutions, the Department and when appropriate, the Executive, and brought before the Legislature through both the annual appropriation process and the reporting system.

My comments upon the Plan concentrate upon the basic process, the 3 objectives proposed in the Plan, and certain goals or objectives not contained in the Plan.

The Process

For the past several months, my staff have been discussing possible changes in the master planning process with you and your colleagues. In my view, the current process does not take full advantage of the intent of the master planning statute. That legislation provides that master planning should:

> "Identify the needs, problems, societal conditions and interests of the citizens of the State of New York to which programs of higher education may most appropriately be addressed."

The clear intent of the legislation was thus to enlist higher education in solving -- or at least addressing -- the problems of the larger community. Master planning has not fostered that partnership. The plans submitted thus far focus instead on the needs of the higher education community and the individual needs of the sectors and requirements imposed upon them. They are, quite simply, too parochial.

The character of the Plan is probably the inevitable result of the process used to create it. The Regents now issue a general call bulletin and the sectors, based upon both that bulletin and their perception of their own needs, produce plans to which the Department reacts. Concurrently the Department writes its own Plan and, after the appropriate public hearings, a consolidated plan is adopted by the Regents and sent on to the Governor for review and approval. At that point the interests of the larger polity become the paramount consideration.

I believe that the process of problem identification should take place before the call bulletin is issued and that both the Governor and the Board of Regents should agree beforehand, after active consultation with the Commissioner's 25 member advisory council of

college and university chief executive officers. I envision the process as a series of meetings in which Executive staff and Education Department staff will develop an agenda for the State which can legitimately be addressed by higher education programs. This agenda, annotated in report form, will be signed jointly by the Chancellor and the Governor and appended to your usual call bulletin. It will help the sectors determine the orientation and contents of their plans within the common framework of the master planning statute. It would not limit the Regents or any higher education institution from adding its own particular concerns to the common framework in master plan submissions.

I place great emphasis upon revision of the process because of my belief that effective master planning is an absolute prerequisite if we are to successfully meet the challenges of the 1980's. Shrinking resources and changing demography cannot be wished away, and if quality is to be maintained, the sectors and the State must cooperate to ensure that resources are used in the most productive manner. Unfortunately, the master planning process has not been as effective as possible, at least partially because of the widespread perception that the State's policy-makers fail to take it seriously. As a result, recent sector input has varied in both timeliness and quality.

Elements Not Adequately Addressed in the Plan

I now wish to comment on several elements either undiscussed or only lightly touched upon by the Plan. I consider these either major State policy issues which should be considered for inclusion in this or future Master Plans, significant structural concerns within higher education insufficiently addressed in the plan, or major social issues which the Plan could address.

Economic Development

The Plan does not specifically mention the promotion of economic growth and recovery as a major goal or objective, although it does discuss a number of related activities. Economic development has been a primary goal of my Administration and it is one in which post-secondary education should play a major role. New York contains within its boundaries a number of the nation's most highly regarded research universities, but has not been able to effectively capitalize upon those resources to secure a proportionately high level of outside grants or to retain high technology industry. Retention of traditional industry is affected as well. Employers leaving our urban

areas cite the relative unavailability of literate trained manpower as a significant factor in industrial flight.

There have been a number of initiatives undertaken to enlist post-secondary institutions in economic development efforts over the past two decades. These included such programs as creation of the Science and Technology Foundation, development of the Education Opportunity Centers and support of contract courses in the Community Colleges. I have sponsored a number of initiatives this year as well, including the new RPI Center and the technology equipment challenge grant program.

Promotion of economic growth has been considered a legitimate function of American higher education at least since passage of the Morrill Act but its success in meeting that goal has not been adequately examined. I call upon the Regents to consider how the State's existing investment in post-secondary education could or should be restructured -- without abandoning the traditional values of higher education -- to provide incentives for economic growth. Existing programs should be listed, evaluated for effectiveness and recommendations made thereon.

Maintaining the Balance Among the Sectors

Another area left unevaluated by the Plan relates to the degree to which the differing problems confronting the several sectors will affect one of the Plan's major objectives, retention of "a balanced system of higher education with four strong and autonomous sectors ...".

Two sectors confront distinct and separate problems. The independent sector institutions must face the effect of inflation on their tuition schedules. Although the gap between the tuition charges of public and private higher education continues to increase, the independent institutions so far continue to enroll their share of students. A special paper done for us by your staff suggests that student demand for independent higher education has proven inelastic; that increasing tuition does not affect student demand. That finding could have profound policy implications if it can be shown to be likely to continue. It may be an artifact of either an ebullient economy or the availability of alternative financing arrangements, however, and both are now in jeopardy. As the effect of these economic pressures on enrollment choices are identified, TAP support schedules should be structured to encourage the maintenance of balance among the sectors. City University faces a more immediate problem as

its enrollments continue to decline. The reasons for the drop and their implications for alternative investment policies are crucial questions for decision-makers. The challenge for City University will be to maintain academic quality while accommodating the inevitable reductions in total budgetary support resulting from enrollment losses. It is a challenge which the other sectors will eventually confront if current enrollment projections materialize. The Plan must devote more attention to methods of assuring quality during budgetary and enrollment decline.

State University senior college enrollments, like those in the independent sector, continue to be strong and the community colleges have enrolled far more than anticipated. They, moreover, may not be as subject to losses caused by reductions in student aid as the higher tuition, independent institutions. Neither these dynamics, their potential consequences on sector balance, nor possible strategies for addressing imbalance are discussed in the Plan. I will comment upon these issues further in my discussion of items 9 and 11.

Remediation

Remediation has been an endemic problem but it is one which is not adequately addressed by the Plan. For example, attrition has been one of CUNY's major problems and attrition is considerably affected by the students' preparation for college level work. The 1981 Legislature initiated a new policy to provide potential dropouts with an opportunity to seek remediation and still receive tuition assistance. This policy judgement effectively accepts and in some respects exceeds your recommendation that economically and educationally disadvantaged college students have equal access to the financial aid and academic support needed to complete their programs, and that their period of entitlement should be longer than the traditional two and four years of undergraduate study.

Passage of the Supplemental Tuition Assistance Program provides up to five years of support for an associate degree and six years for a baccalaureate. This generous support and the increasing need for post-secondary remediation makes it crucial for the sectors and the Department to clearly define what remediation is, who should receive it, and how it may be evaluated. The Plan is virtually silent on this pivotal issue as well as on the relative roles of the higher education and the secondary education communities in addressing it. (See Objective 7 below) The State should not be expected to pay for a high school education twice.

I call upon the Regents, therefore, to work with both the secondary and post-secondary educational communities to enhance articulation between the two levels. I have already commented favorably upon CUNY's approach in my special message on education, and in their comments upon the CUNY plan, the Regents commend CUNY's joint work with the City Board of Education. These initiatives should be monitored, evaluated and, if appropriate, circulated to a wider audience.

I also call upon the Regents to make recommendations with respect to remediation, specifically addressing such issues as which institutions should provide remediation, who should receive it and how such programs can be evaluated.

Health Sciences Training

The Plan provides little guidance in another major policy area -- development of the health sciences. Policy debates over the past decade have focused upon the following questions:

-- the distribution (or maldistribution) of medical practitioners both geographically and by speciality;

-- the need for more graduates and more institutions;

-- attracting more minority students to the health professions;

-- the role of the educational institution as provider of service;

-- control and finance of graduate medical education.

None of these questions are directly addressed by the Master Plan. Most of these questions are both public health and educational issues and some have, in fact, already been examined by either a special commission or an interdepartmental committee. The Health Planning Commission, for example, has recently released a report dealing with both physician shortage areas and recruitment of minority students.

The question of the number of institutions and medical graduates required is more nearly a pure educational issue and one upon which there has been a major shift in recent years. A national advisory committee has recommended reducing medical school admissions by 10 percent between 1981 and 1984 and the Federal government has

drastically cutback its operating support for such schools. The Regents, however have not provided any guidance since their 1975 position paper which urged the State to expand the annual number of medical school graduates in State supported programs by 33 percent to 2,000.

Similar, if not quite as stark, divergences attend Regents' policies for dental, nursing and paraprofessional education.

Re-evaluation of the Regents 1975 position paper should be given high priority as should policies for training of other health sciences professionals. The policy has implicitly or explicitly been used to justify a number of programs for the further expansion of health sciences education. If the existing policy is obsolete -- and I believe it is -- a new policy should be formulated well before the end of the current master planning cycle. I call upon the Regents to work with the appropriate health planning agencies to develop new policies to increase minority representation and address other service goals.

Accreditation

The primary instrument for assuring educational quality has historically been the accreditation process and, in most cases, it has served that purpose well. There is some evidence, however, that the process might have been used to force an artificially high level of investment in specific programs. A number of recent accreditation reports seem to focus not upon whether students are being adequately prepared for future endeavors, but rather upon whether the school, or the State, has provided resources at a theoretically desirable level. Resource oriented accreditation reports have been concentrated in those schools accredited by specific professional associations. Although this issue does not require treatment in the Plan, I request that the Regents study both the relative quality of the preparation of the graduates of schools or programs subjected to either provisional accreditation or loss of accreditation and the tangible effect of increased resources upon academic quality.

Commentary upon the Thirteen Master Plan Objectives and Enrollments

1. By 1990, the quality of education in New York's post-secondary institutions will be improved, as indicated by the level of student skills and knowledge demonstrated on performance measures developed or selected by the institution.

Accepted -- with the following understandings:

Many institutions within the State perform quite well and might find it difficult to demonstrate real improvement. I recognize and support, however, the value of tailored institutional measures for self-assessment.

We strongly endorse this new emphasis upon "outcomes" as quality measures. The Department's own regulatory activities have, in the past, often concentrated upon resource "inputs" to a greater extent. We anticipate that the change in emphasis will eventually be embodied in regulation as well. This approach is consistent with my previous comment on accreditation.

2. Objective 2 would require the State's post-secondary institutions to show, by 1990, "improved" attrition rates by comparison with their 1980 rates and in relation to the comparable rates in other states.

Accepted -- with the following reservation:

This objective appears designed to encourage institutions to engage in better remedial, counseling and diagnostic programs. It may not necessarily have that effect, however. Attrition can result from a variety of causes including academic underpreparation, financial difficulties, or personal problems. Some such problems are at least partially beyond institutional control. Others can be more effectively controlled by the institution but not necessarily in a manner consistent with other Plan goals and objectives. Institutions could, for example, cope with a mandate for an improved attrition rate by tightening admissions standards thereby effectively limiting access. I suggest a shift in emphasis to institutional assessment of the reasons for attrition and development of better educational support systems for the academically underprepared. (See my previous comments on remediation)

3. Objective 3 would establish the goal of "improving" the percentage of students placed in jobs or graduate programs related to their fields of study.

This objective appears to be designed to have the following effects:

-- expansion of vocationally oriented programs whose

Accepted, with the following reservations:

Although I have some obvious reservations about the use of aggregate expenditures as an indicator of excellence, I agree that the objective points to an increasingly troublesome area. New York State has an impressive array of research universities and institutes but has not done as well as it might in terms of attracting grants. Although New York State ranks second in population and income, and first in Federal tax contributions, it is a distant fourth in the receipt of Federal research and development funds, receiving less than 20 percent of the amount allocated to California. In fact, New York is the only major research state showing a steady decline in Federal research and development support from 1965 through 1976. According to a recent paper prepared by the Education Department the problem rests more with the competitiveness of our industries, not with our colleges. New York's industrial concerns have lost ground in the competition for the Federal dollar. That problem led me to support the several new technology programs proposed in my 1982-83 Executive Budget.

6. Objective 6 proposes a variety of goals for libraries including: an increase in the gross collection size of New York libraries so that it maintains its position among the States; total bibliographic access to all State academic library resources; two-thirds of the colleges to provide quality library user instruction; and all students to have access to computers and training in their use.

Accepted with Conditions

I will accept these as general targets but not as goals to be achieved in their entirety. These objectives have one common characteristic, an undefined but probably heavy price tag for full implementation.

The Plan notes that New York institutions now possesses about 10 percent of the nation's academic library resources. Maintaining that standard in the face of the nation's shifting financial resources and demography might prove financially infeasible. The other objectives should be closely analyzed to determine whether they involve a reasonable cost/benefit ratio. City University, for example, has embarked upon a union catalog project but has decided that full listing of all its existing holdings would be impossibly costly. Therefore, the University

graduates have a record of finding jobs;

-- contraction of other programs -- for example, teacher training, graduate social studies, and languages -- where the opposite situation applies;

-- development of better liaison with potential employers and more informed counseling of students.

Accepted -- As Noted

I agree that the objective is desirable, and consider it a useful component of the economic development program cited earlier. There are problems. Success -- or failure -- is hard to measure except in the long-term and manpower requirements tend to shift abruptly. The objective may also encourage some institutions to shift their programs abruptly or unwisely from traditionally strong academic areas. Translating this objective, therefore, into detailed policy guidance for the institutions will be extremely difficult.

The objective implies, although it does not state, that the Regents will take a harder line toward approving new offerings in crowded fields.

4. Objective 4 would measure growth in academic quality by an increase in the State's rank among the states in the number/proportion of out-of-state or foreign students, National Merit and Westinghouse scholars, and Regents scholars electing to study in its post-secondary institutions.

Accepted in Principle

These are not direct measures of quality but pending development of more comprehensive indicators I accept them as beginning efforts.

5. Objective 5 would establish as goals: increasing research expenditures at New York State institutions to more than 10 percent of the national total; and maintenance, by the State's leading research universities, of their national ranking in terms of research expenditures.

has concentrated upon new and recent acquisitions. Other institutions may well make the same judgement. Computer literacy is a goal which may be more economically and productively achieved at the elementary and secondary levels.

7. Objective 7 proposes that the 1990 college participation rate of recent high school graduates will exceed that of 1980 and, further, that by 1990 the educational attainment level of adults in New York State will exceed the national mean.

Noted

Although I do not reject the objective I believe it should be redefined. The 1980 "participation rate" in New York State (the ratio of entering full-time, first-time students to the previous spring's high school graduating class) amounted to 61.5 percent in 1980, an increases of 2.1 points over 1979. That rate is high by historical standards and probably should not be used as a base. The rate appeared to be the product of two factors -- a stagnant economy and an increased interest in college attendance by older students. An improving economy and the increasing educational level of the State's older population may make maintaining that rate difficult. Another major problem relates to my comments upon secondary and post-secondary articulation. New York still has an unacceptably high dropout rate in its urban high schools. Until that problem is successfully addressed, we will continue to have a mediocre record.

8. Objective 8 provides that by 1990 the proportion of degrees awarded minority group members at each degree level will increase more than the proportion of minorities in the State's population increases.

The Department estimates that attainment of this objective would require an approximate 25 percent increase in the number of degrees granted minority group members. It would involve, among other activities:

-- a decrease in the high school attrition rate;

-- increased emphasis upon minority student recruitment;

-- continuation or expansion of bridging programs into professional education;

-- more intensive and effective remediation and counseling programs.

Accepted

These elements are within the context of existing State policy.

9. Objective 9 commits the State to continuation of its existing higher educational structure of four strong and autonomous sectors.

Accepted

This objective has been commented upon extensively earlier and, as I noted, the Plan fails to offer specific recommendations about how to maintain the health of the sectors in the face of potentially adverse trends.

The sectors must concentrate on cost control and cooperation. Cost control will preserve their ability to offer quality programs without undue dependence upon depleted public resources. Cooperation will lead to improved cost control and should take several forms. Creative sharing of resources and allocation of responsibilities are obviously crucial. Strong existing programs should not be weakened by needless duplication by other institutions. It is also essential that each of the major sectors recognize the legitimacy of the others. The independent institutions should not seek specific support for individual programs and the public institutions should not seek to increase their market share through an artificial limitation on tuition. As the cost of public higher education increases, public sector tuition must at least keep pace.

10. This objective commits the Department and the post-secondary institutions to "linking" courses offered by non-degree granting institutions to degree programs if the sponsor requests such linkage.

Accepted -- As Noted

I trust that the Department will ensure that such linkage will be done as economically as possible and not dilute academic quality.

11. Objective 11 provides that State expenditures for higher education in 1990 as adjusted for inflation, should be less than

those in 1980 if enrollment decreases as expected, but also that expenditures should decrease proportionately less than enrollments.

Not Accepted -- This objective proposes a type of "demographic dividend" under which a portion of the money freed by loss of students would be used to improve programs.

I have no objection to less than proportionate reductions in the short-term and I have proposed, and the Legislature adopted, changes in the community college aid formula to ensure that the institutions are not unduly penalized by unpredictable changes in enrollment. Bundy aid, because of its method of distribution, is inherently slow to react to enrollment changes. Similarly, enrollment-related reductions have been phased at City and State Universities. That does not mean that I support long-term protection against budget reductions stemming from enrollment declines. The point of short-term protection is to permit long-term adjustments to take place in a rational manner, not to deny their necessity.

12. By 1990 the amount of non-residential space in New York's post-secondary facilities will decrease in comparison with 1980, but space will not decrease by as great a proportion as enrollment. The proportion of space judged to be in good condition will increase. (This objective is supplemented by an "activity" which would require submission of a higher education construction impact statement justifying each proposed construction project.)

Not Accepted -- I cannot agree with this objective. The State's post-secondary institutions should move aggressively to close spaces which are not required and to learn to make more intensive use of the spaces which remain. The enormous and growing expenditures for energy alone leave little alternative. The determinant should be the amount of space reasonably required to house anticipated programs and student enrollments. Anticipated enrollment reductions could thus justify space reductions but these need not be proportionate to the student loss. If an institution had a space surplus in 1980, space loss should outpace enrollment reductions. I call upon the Regents to continue the development of technique and data to better judge the existence of space surpluses or deficits.

The higher education construction impact statement is an interesting concept and one which should be developed further to provide a review procedure for independent sector institutions seeking financing from public agencies. This would be analogous to the review inherent in the appropriation process for public institutions. To facilitate the prompt implementation of this procedure, the Budget Division and the Education Department should exchange all necessary information.

13. By 1990, maximum use will be made of the resources of all types of libraries in New York State to support instruction and research in the colleges and universities.

Accepted -- This objective is desirable. I have already signed legislation strengthening the interlibrary loan system thus making implementation of this objective more feasible.

Enrollment

The Master Plan's enrollment projections and enrollment goals serve as general long-term planning tools. In the past, these projections have been useful as general measures of future capital requirements and overall, long-term Statewide enrollment potential.

I encourage efforts by the Education Department to refine its enrollment estimation methodology so analyses of past enrollment trends and future projections are available for consideration in program and policy planning at many institutional, regional, sector and Statewide levels.

Moreover, I urge the Department to refine its enrollment projection methodologies to provide more useful data for short-term operational and program analysis and comparisons with estimates developed within each sector. Such refinements would enhance the availability of useful information to higher educational policy-makers at all levels.

In conclusion, I wish to express my appreciation for the very real improvements which you have made in the planning process. My comments, extensive as they are, are designed to build upon the concepts which you have advanced.

Sincerely,

Hugh L. Carey

BOARD OF REGENTS
THE UNIVERSITY OF THE STATE OF NEW YORK
THE STATE EDUCATION BUILDING
ALBANY, NEW YORK 12234

July 2, 1982

Dear Governor Carey:

Thank you for your May 5, 1982, letter of action on The Regents Statewide Plan for the Development of Postsecondary Education, 1980, and for your extensive comments on the 1980 Statewide Plan and on the master-planning process. We appreciate the care and thought that you and your staff have given to the review of the Statewide Plan.

We are delighted that you have generally found the Plan and its objectives acceptable, although in some cases with conditions or reservations. We are, of course, disappointed that you did not approve Objective 11, related to finances, and Objective 12, related to facilities. Those topics, and others you have proposed, will be addressed in our 1982 Progress Report, to be submitted to you by November 1, 1982, and in the 1984 Statewide Plan. We regard the master-planning process as a very serious responsibility and believe that the efforts of the Regents and the Executive should complement each other in order to further the well-being of the people of New York State.

We would like to take this opportunity to discuss briefly several of the topics you addressed in your letter.

The Master-Planning Process

According to the statute cited in your letter, the master-planning process should identify current and, to the extent possible, emerging, "needs, problems, societal conditions and interests of the citizens of the state of New York to which programs of higher education may most appropriately be addressed." Those issues can best be defined by a collaborative process that involves as fully as possible the Regents and the Education Department, the postsecondary institutions, the Executive, and the legislative leaders. At the same time, since this formal process of definition of issues takes place only once every four years, it is vital that master-planning remain sufficiently flexible to be able to respond to issues that emerge after the formal process of definition. Sections 237, 354, and 6206 of Education Law seem to anticipate that need for flexibility in authorizing, respectively, the Regents, State University, and City University to amend their plans at any time.

The master-planning process can be described as having four parts: (1) definition of issues, which, as noted above, should result from a collaborative effort by the Regents and the Department, the institutions, the Executive, and the legislative leaders; (2) clarification of issues in institutional and sector master plans and in research and technical reports by the Department; (3) development of recommendations, involving the Regents and the Department, institutions, and the public, and (4) review and approval by the Executive. Department staff will continue to discuss with your staff the positive proposals contained in your letter for strengthening the master-planning process to address the challenges of the 1980's.

Economic Development

We share your concern that postsecondary education play a significant role in economic development in New York. As we noted in the Foreword to the 1980 Plan, we saw the Plan's objectives as speaking to the strengthening of New York's economy "by the encouragement of library development and university research that will put New York in the first rank among the states, by the development of effective coordination between postsecondary institutions and business and industry in the planning of education and training programs, and by the improvement of the quality and attractiveness of New York's diverse postsecondary system for students from all parts of the United States and the world."

Several of the objectives we set in the Plan in cooperation with the postsecondary system, and which you have approved, will significantly benefit economic development as they are achieved. These include objectives 3, related to improving job placement and admission to more advanced levels of study; 5, related to improving the amount and quality of research; 7, related to improving educational attainment; and 10, related to improving linkages between postsecondary education and training offered by non-degree granting organizations. Together, they should result in enhanced relationships of educational programs to employment needs, increased Federal and private support for research, and increased attractiveness of New York for high technology industry.

Like you, the Regents have proposed specific initiatives this year to enhance postsecondary education's contributions to economic development. Our 1982 legislative program includes bills that would authorize the establishment of Centers of Advanced Technology at public or independent institutions and that would create a research equipment acquisition program to assist institutions to acquire expensive scientific equipment related to fields of research likely to benefit New York's economy. These proposals are derived from the Plan and its objectives.

We share the concern you voiced that "Employers leaving our urban areas cite the relative unavailability of literate trained manpower as a significant factor in industrial flight." As you know, with the establishment of the Regents Competency Tests as a requirement for high school graduation, New York has the most rigorous high school graduation standards in the nation. Your comment is particularly disturbing in light of the very favorable comments made in 1981 by Battelle Columbus Laboratories in their initial feasibility analysis presented to the New

York State Science and Technology Foundation. Those comments included, "New York State has long been recognized by the business community as the home of some of the finest academic institutions in the world." "High technology industries located in the State view the postsecondary system in very favorable terms...." "The higher education system in New York State is viewed by resident industry as an excellent source of entry level technical personnel." Representatives of industry "were nearly unanimous in their belief that these programs [at BOCES] were doing a competent job of training entry level, skilled tradesmen and technicians...."

Maintaining the Balance Among the Sectors

One of the four goals set in the 1980 Plan was Diversity: "To preserve and foster a diversity of institutions and programs so that students may choose and study in those appropriate to their needs, interests, and abilities from a wide range reflecting the full diversity of our State." This goal requires the maintenance of an appropriate balance among the four public and non-public sectors of postsecondary education. We intend to review this topic in the 1982 Progress Report and propose ways of measuring balance in such areas as enrollment shares and net cost of attendance ratios so that we can report regularly on those measures and so that we can make in the 1984 Plan any specific recommendations needed.

One essential element in the maintenance of balance among the sectors, and of access to postsecondary education, is student aid. Both the Department and the Higher Education Services Corporation are developing new tools for evaluating the adequacy of State and Federal student aid.

Remediation

We believe that remediation is the process of assisting persons who are seeking postsecondary education, but who do not have sufficient educational attainment to participate in it effectively, to improve their knowledge, skills, and attitudes to undertake college-level study. From an educational perspective, and as our goal of Access implies, remediation should be made available to all who need it and can benefit from it.

We believe that it will be necessary to continue to provide remedial study in both high schools and colleges. The Resource Allocation Plan and the requirements for registration of high schools are intended to assure that remediation is provided before high school graduation. However, while high school graduation requirements, including the Regents Competency Tests, are intended to assure that all New York high school graduates meet defined levels of competency, passing the RCT's and meeting other high school graduation requirements do not necessarily mean that all high school graduates have all the knowledge, skills, and attitudes needed to benefit from college-level study. Such students will continue to need assistance.

Increasingly, however, postsecondary remedial efforts will focus on the older, returning student. In 1981, 28 percent of undergraduate enrollment in New York State was 25 and older. Adult participation in college is growing, as employment

opportunities for those without a college education decrease, large numbers of older women seek preparation to enter or return to the workforce, and colleges expand the opportunities for part-time study, evening or weekend courses, and classrooms close to work sites or residential areas. Many adult students never completed high school, have forgotten some of what they learned there, or are not prepared for today's college curriculum. Many are immigrants and require additional preparation in English or in other subjects not well covered in their previous school experience.

We do believe that improved articulation between postsecondary and secondary education can reduce somewhat the overall need for post high school remediation. We intend to continue our work with the postsecondary and secondary education communities to enhance articulation.

The Department is seeking and will continue to seek funds for a pilot effort to assess opportunity programs. If funded, that effort will assist us to determine the best ways to evaluate remediation, so that we can request the resources we will need to carry out that very important task.

Health Sciences Training

Recently the Regents reviewed information on physicians and on dentists practicing in New York that was gathered through questionnaires included with the most recent applications for re-registration of licenses. Similar information-gathering efforts are planned for those and other professions in our attempt to develop a data base on manpower in the licensed professions. In the Regents 1982 Legislative Program an appropriation for that purpose has been requested. Such data are essential for the development of policies related to health professional education, but must be augmented by other information, including health needs, current and projected enrollments in educational programs for the health professions, and population projections. This information must be reviewed in cooperation with other concerned agencies, and principally with the Health Planning Commission, with which the Department has been working since before 1978.

At this time, the Department is undertaking a review of physician manpower projections in New York State. With the assistance of staff of the Health Planning Commission, our staff hope to complete this review in about six months. On the basis of this review, the Regents intend to make recommendations concerning physician manpower policy and medical education in New York. The Regents recently issued a report and recommendations on dental manpower and dental education. Some of those recommendations will be further developed in the coming months.

Accreditation

Thank you for your statements of concern about the voluntary accreditation process. As we have told your staff, we stand ready to discuss those concerns with them and to work with them in this area.

Comments on the Thirteen Objectives

Objective 1. We are pleased that you support this objective that calls for improvement in levels of student skills and knowledge according to performance measures chosen by each institution. We do intend to continue to seek useful ways of measuring "outcomes" as indicators of quality. The state of the art in this process is not advanced, however. It will be several years, at least, before measures of outcomes can become a significant element in the assessment of quality.

Objective 2. We concur that, at the present time, the most fruitful means of improving retention rates is through improved diagnostic, counseling, and remedial programs at institutions.

Objective 3. This objective seeks both improved job placement and improved placement in more advanced levels of study. To the extent that it speaks to improving direct relationships between education and employment, we agree that it is very difficult to advise institutions about employment areas appropriate for persons with postsecondary education. Some institutions now are very responsive to employment needs and may not need advice. We believe that it is appropriate for the Department to conduct studies of specific fields of employment, such as the recent studies in the fields of dentistry, engineering, medicine, and public school teaching, and disseminate the results of those studies as widely as possible.

Objective 4. We are pleased that you have accepted this objective.

Objective 5. We concur with your concern about the competitiveness of New York industry for research funds, and we support carefully targeted efforts to enhance New York as a location for high technology and new technology industry.

Objective 6. You accepted this objective, related to ensuring adequate academic support services, with conditions, "as general targets but not as goals to be achieved in their entirety." We do not believe they carry a "heavy price tag for full implementation." With the exception of that part of Objective 6 intended to assure appropriate access to computers, we believe that existing mechanisms will be adequate to support attainment of this objective.

New York's current leadership position in academic library strength can be maintained if library holdings increase by only one percent per year. (Between 1978-79 and 1979-80, they increased by four percent.) The Coordinated Collection Development Program established in Chapter 718 of the Laws of 1981, together with other existing funding programs, supports planned growth of collections, encouraging regional resource sharing and cooperation in developing library resources.

New York's interlibrary loan networks, strengthened by Chapter 718, ensure bibliographic access without significant increases in expenditures. The networks that have been established provide access, efficiency, and flexibility. They take into account the magnitude of library resources, the substantial body of those resources which have been brought under bibliographic control, and the ways in which a rapidly developing technology can be used in a targeted effort to provide cost effective library services. We believe that City University's decision concerning its union catalog project was appropriate under this objective, and is

consistent with statewide planning.

Increasing library user instruction should not require additional funds; such instruction is part of the professional responsibilities of college library staffs.

There is some cost associated with the provision of appropriate student access to computers. We believe, however, that it is essential that such access be assured. If, as you suggest, computer literacy is achieved in the elementary and secondary schools, college students will expect continued access to computers.

Objective 7. You neither approved nor disapproved this objective, citing the difficulties in maintaining the college-going rate at its 1980 level. In fact, the college-going rate increased again between 1980 and 1981, from 61.5 percent to 62.1 percent.

According to the most recent Current Population Survey conducted by the Bureau of the Census, in 1981 the proportion of New York's population between the ages of 25 and 44 with at least four years of high school exceeded the nationwide proportion (83.4 percent in New York, 82.9 percent nationwide), as did the proportion of 25 to 44 year old New Yorkers with four or more years of college (24.9 percent in New York, 24.1 percent nationwide). This seems better than "mediocre."

We are concerned about unacceptably high drop-out rates in some high schools, and we already have taken corrective action by modifying high school registration standards to incorporate a requirement related to maintaining acceptable retention levels. High schools now must maintain both acceptable pass rates on the Regents Competency Tests and acceptable retention rates. Those requirements, together with our Resource Allocation Plan and other measures, should ensure both acceptable retention levels in high schools and appropriate levels of competence by high school graduates. Of course, better preparation of high school graduates and a reduced high school drop-out rate will not eliminate the need for post-high school remediation, as we noted above in the discussion of this topic. Particularly because of the large number of older, returning students, many of whom are underprepared, the colleges will need to continue to offer remedial instruction.

Objective 8. We are pleased that you support this objective.

Objective 9. Our plans for reviewing the maintenance of balance among the sectors are discussed above.

Objective 10. We are pleased that you approved this objective. As you know, we see linkages between postsecondary institutions and corporate training programs and other non-degree organizations as an important element in promoting New York's economic development. The Office on Non-collegiate Sponsored Instruction operates at no cost to the State; it is supported exclusively by private funds. Its procedures are designed to ensure the maintenance of academic quality.

Objective 11. We are disappointed that you did not approve this objective, related to financial support for postsecondary education. We do not fully share the view that, on a long-term basis, there are no fixed costs in higher education. Not all costs vary directly with enrollments; some are related to the existence of an institution, whatever its size. There are institutions in both the public and independent sectors that make unique contributions to New York's economic development and well-being aside from enrollments, through vital research and service programs.

The response seems to be based on the premise that the objective was intended to be applicable to individual institutions or programs. This is not the case. The objective was meant to be applicable only to the aggregate State support for postsecondary education. It is not clear, for example, that the objective and the reasons given for your disapproval are mutually exclusive. In any event, our staff looks forward to exploring with staff of the Executive and the Division of the Budget approaches to financing policies for postsecondary education that might be appropriate for inclusion in the 1984 Plan.

Objective 12. We are also disappointed that you did not approve this objective related to postsecondary education facilities. As with Objective 11, your comments suggest that you saw it being applied to each individual campus. We did not so intend; the objective spoke in terms of the total amount of non-residential space in the postsecondary system as a whole. Clearly, at some campuses that now have a "surplus" of space, it would be appropriate to reduce space more than proportionately to enrollment decline. However, at other institutions, whether because they now are over-crowded or for programmatic reasons, it might be better to reduce the space in use by an amount that is less than proportional to enrollment decline.

Our staff will continue to explore with staff of the Executive and of the Division of the Budget approaches to facilities policies for postsecondary education that might be appropriate for inclusion in the 1984 Plan. We intend to ask all sectors to include comprehensive space plans in the 1984 sector master plans.

Objective 13. We are pleased that you have approved, and endorsed as desirable, this objective.

Enrollment. Thank you for your support for the Department's enrollment projection activities. Our staff will continue to explore ways to improve enrollment projection, in order to make it useful for a wider variety of purposes. They will continue to explore such ways with your staff.

In conclusion, we want to reiterate that the Regents and the Department take very seriously the responsibility of long-range planning for postsecondary education. We appreciate the care you have given to your review of the 1980 Plan.

Sincerely,

Willard A. Genrich
CHANCELLOR

Gordon M. Ambach
Commissioner of Education

The Honorable Hugh L. Carey
Governor
State of New York
Executive Chambers
State Capitol
Albany, New York 12224

Appendix C

MASTER PLAN AMENDMENTS
Approved by the Regents
November 1, 1980, through October 31, 1982

INDEPENDENT INSTITUTIONS

Adelphi University (9/25/81)

Authorized Adelphi University to establish a program in nursing leading to the degree of Doctor of Philosophy (Ph.D.).

Bard College (12/19/80)

Authorized Bard College to establish a program in fine arts leading to the degree of Master of Fine Arts (M.F.A.).

Clarkson College of Technology (9/25/81)

Authorized Clarkson College of Technology to establish a program in technical communications leading to the degree of Bachelor of Science (B.S.).

The Cochran School of Nursing (7/31/81)

Authorized The Cochran School of Nursing of St. John's Riverside Hospital to confer the degree of Associate in Applied Science (A.A.S.) on duly qualified students completing registered programs and to establish a program in nursing leading to the degree of Associate in Applied Science (A.A.S.).

The College of New Rochelle and Iona College (6/26/81)

Authorized The College of New Rochelle and Iona College to establish joint programs in school administration and supervision leading to the degree of Master of Science in Education (M.S. in Ed.) and three such programs leading to a professional certificate. (Master plan amendment was required for each institution.)

The College of St. Rose (11/20/80)

Authorized The College of St. Rose to establish a program in communications arts leading to the degree of Bachelor of Arts (B.A.).

Cornell University (12/19/80)

Authorized Cornell University to establish programs in environmental toxicology leading to the degree of Master of Science (M.S.) and Doctor of Philosophy (Ph.D.).

Dominican College of Blauvelt (5/22/81)

Authorized Dominican College of Blauvelt to establish a generic (full four-year) program in nursing leading to the degree of Bachelor of Science in Nursing (B.S. in Nursing).

D'Youville College (9/24/82)

Authorized D'Youville College to confer the degree of Master of Science (M.S.) upon duly qualified students completing registered programs and to establish a program in nursing leading to the degree of Master of Science (M.S.), with the condition that such approval does not extend master plan authority for other master degree programs at D'Youville College.

Elizabeth Seton College (10/23/81)

Authorized Elizabeth Seton College to establish a program in chemical technology leading to the degree of Associate in Science (A.S.).

Hofstra University (10/23/81)

Authorized Hofstra University to confer the degree of Bachelor of Engineering (B.E.) on duly qualified students completing registered programs and to establish a program in engineering science leading to the degree of Bachelor of Engineering (B.E.).

Iona College (4/23/82)

Authorized Iona College to establish a branch campus in Orangeburg, Rockland County, in lieu of an interinstitutional program at Saint Thomas Aquinas College and to offer at that branch campus, in addition to Master of Business Administration (M.B.A.) programs previously authorized, programs in biology "7-12," English "7-12," mathematics "7-12" (math-computer science education), social studies "7-12," Spanish "7-12," urban education, and school administration and supervision leading to the degree of Master of Science in Education (M.S. in Ed.); programs in counseling/gerontology, family counseling, computer science, and communications leading to the degree of Master of Science (M.S.), and a program in school district administration leading to a professional diploma.

The Jewish Theological Seminary of America (10/23/81)

Authorized The Jewish Theological Seminary of America to establish a program in religious ministry leading to the degree of Doctor of Hebrew Literature (D.H.L.).

Long Island University (5/22/81)

Authorized Long Island University to confer the degree of Master of Public Administration (M.P.A.) on duly qualified students completing registered programs at the Brooklyn Center and to establish a program in public administration leading to the degree of Master of Public Administration (M.P.A.) at the Brooklyn Center.

Long Island University (5/22/81)

Authorized Long Island University to establish an interinstitutional program of C.W. Post College on the campus of Dominican College of Blauvelt and to offer at that location the following programs: business administration (M.B.A.), public administration (M.P.A.), accounting (M.S.), school counselor (M.S.), community mental health counseling (M.S.), elementary education N-6 (M.S.in Ed.), and reading teacher (M.S. in Ed.).

Long Island University (7/31/81)

Authorized Long Island University to establish a branch campus of C. W. Post College at psychiatric centers of the Department of Mental Hygiene and to offer at that branch campus a program in community mental health counseling leading to the degree of Master of Science (M.S.).

Long Island University (9/25/81)

Authorized C. W. Post College of Long Island University to establish a program in health care administration leading to the degree of Master of Public Administration (M.P.A.) at its interinstitutional program on the campus of Dominican College of Blauvelt.

Long Island University (2/26/82)

Authorized Long Island University to establish a program in health care administration leading to the degree of Master of Public Administration (M.P.A.), at the Suffolk branch campus of C. W. Post College of Long Island University and to extend authorization of the branch campus at Brentwood, Suffolk County, without term.

Manhattanville College (7/30/82)

Authorized Manhattanville College to establish a program in management leading to the degree of Bachelor of Arts (B.A.).

Marist College (2/27/81)

Authorized Marist College to establish a program in medical technology leading to the degree of Bachelor of Science (B.S.).

Marist College (9/24/82)

Authorized Marist College to confer the degree of Master of Science (M.S.) on duly qualified students completing registered programs and to establish a program in computer science leading to the degree of Master of Science (M.S.).

Mercy College (6/26/81)

Authorized Mercy College to establish a program in veterinary technology-management leading to the degree of Bachelor of Science (B.S.).

Mercy College (10/23/81)

Authorized Mercy College to establish a program in journalism and media leading to the degree of Bachelor of Science (B.S.).

Mercy College (11/20/81)

Authorized Mercy College to confer the degree of Master of Science (M.S.) and to establish a program in nursing leading to the degree of Master of Science (M.S.), with the condition that such approval does not extend master plan authority for other master's degree programs.

Mercy College (7/30/82)

Authorized Mercy College to establish a program in computer information systems leading to the degree of Bachelor of Science (B.S.), to be offered at the Yorktown Heights campus.

Mount Saint Mary College (9/25/81)

Authorized Mount Saint Mary College to establish a program in communication arts leading to the degree of Bachelor of Arts (B.A.).

New School for Social Research (10/22/82)

Authorized New School for Social Research to establish a branch campus at the following facilities of the Department of Mental Hygiene: Hutchings Psychiatric Center, Syracuse, Onondaga County; Middletown Psychiatric Center, Middletown, Orange County; and Pilgrim Psychiatric Center, West Brentwood, Suffolk County, and to offer at that branch campus a program in health services administration leading to the degree of Master of Professional Studies (M.P.S.).

New York Law School (2/26/82)

Authorized New York Law School to confer the degree of Master of Laws (LL.M.) on duly qualified students completing registered programs and to establish a program in media law leading to the degree of Master of Laws (LL.M.).

New York Medical College (1/19/82)

Authorized New York Medical College to confer the degree of Master of Public Health (M.P.H.) on duly qualified students completing registered programs and to establish programs in biostatistics, developmental disabilities, epidemiology, health policy planning and administration, nutrition, and occupational health leading to the degree of Master of Public Health (M.P.H.).

New York University (10/23/81)

Authorized New York University to establish a program in applied science leading to the degree of Doctor of Philosophy (Ph.D.).

New York University (7/30/82)

Authorized New York University to confer the degree of Master of Public Health (M.P.H.) on duly qualified students completing registered programs and to establish a program in community health education leading to the degree of Master of Public Health (M.P.H.).

New York Institute of Technology (2/26/82)

Authorized New York Institute of Technology to establish a program in radiologic specialist assistant leading to the degree of Bachelor of Science (B.S.) to be offered at the Old Westbury campus and the metropolitan center in Manhattan.

New York Institute of Technology (5/21/82)

Authorized New York Institute of Technology to establish programs in electrical engineering, industrial engineering, and mechanical engineering leading to the degree of Bachelor of Science (B.S.) at its campus in Old Westbury and at its metropolitan center in Manhattan.

Niagara University (11/20/80)

Authorized Niagara University to establish a program in business and commerce leading to the degree of Master of Business Administration (M.B.A.).

Parsons School of Design (3/27/81)

Authorized Parsons School of Design to confer the degree of Master of Arts (M.A.) on duly qualified students completing registered programs and to establish a program in the history of decorative arts leading to the degree of Master of Arts (M.A.).

Roberts Wesleyan College (9/25/81)

Authorized Roberts Wesleyan College to establish a program in business administration leading to the degree of Bachelor of Science (B.S.).

Rochester Institute of Technology (11/20/80)

Authorized Rochester Institute of Technology to establish a program in managerial economics leading to the degree of Bachelor of Arts (B.A.) at Eisenhower College of R.I.T., in Seneca Falls.

Russell Sage College (4/23/82)

Authorized Russell Sage College to confer the degree of Master of Business Administration (M.B.A.) and to establish a program in business administration leading to the degree of Master of Business Administration (M.B.A.) at its main campus in Troy and its branch campus in Albany.

St. Bernard's Seminary (now St. Bernard's Institute) (9/25/81)

Authorized St. Bernard's Seminary to change its mission from the preparation of seminarians for the Roman Catholic priesthood to the provision to men and women of academic and professional programs leading to the degrees of Master of Divinity (M.Div.) and Master of Arts (M.A.).

St. Francis College (12/19/80)

Authorized St. Francis College to establish a program in communication arts leading to the degree of Bachelor of Arts (B.A.).

St. Joseph's College (7/31/81)

Authorized St. Joseph's College to establish a program in business administration leading to the degree of Bachelor of Science (B.S.) at its main campus in Brooklyn and its branch campus in Patchogue.

St. Thomas Aquinas College (11/20/80)

Authorized St. Thomas Aquinas College to establish a program in communications leading to the degree of Bachelor of Arts (B.A.).

St. Thomas Aquinas College (11/20/81)

Authorized St. Thomas Aquinas College to confer the degrees of Associate in Arts (A.A.) and Associate in Science (A.S.) on duly qualified students completing registered programs and to establish a program in humanities and social sciences leading to the degree of Associate in Arts (A.A.) and a program in business administration leading to the Associate in Science (A.S.) degree, both programs to be offered only at the United States Military Academy, West Point, and Stewart Army Subpost, Newburgh, and only to military personnel and their dependents.

Seminary of the Immaculate Conception (2/26/82)

Authorized the Seminary of the Immaculate Conception to confer the degree of Master of Arts (M.A.) on duly qualified students completing registered programs and to establish a program in theology leading to the degree of Master of Arts (M.A.).

Teachers College, Columbia University (9/25/81)

Authorized Teachers College, Columbia University, to establish a program, entry into the educating profession, leading to the degree of Doctor of Education (Ed.D.).

Union College (4/23/82)

Authorized Union College to establish a branch campus in Poughkeepsie, Dutchess County, and to offer at that location programs in computer science/software and computer science/hardware, leading to the degree of Bachelor of Science (B.S.); programs in computer science, industrial administration, and operations research and statistics, leading to the degree of Master of Science (M.S.); and a program in business administration leading to the degree of Master of Business Administration (M.B.A.).

University of Rochester (6/26/81)

Authorized the University of Rochester to establish a program in conducting leading to the degree of Doctor of Musical Arts (D.M.A.).

Utica College of Syracuse University (9/24/82)

Authorized Utica College of Syracuse University to establish a program in nursing leading to the degree of Bachelor of Science (B.S.)

Wagner College (10/22/82)

Authorized Wagner College to establish a physician's assistant program leading to the degree of Bachelor of Science (B.S.).

STATE UNIVERSITY OF NEW YORK

SUNY Albany (1/20/81)

Authorized State University to establish a program in counseling psychology leading to the degree of Doctor of Philosophy (Ph.D.) at the State University of New York at Albany.

Approved by the Governor on 6/16/81.

SUNY Albany (10/23/81)

Authorized the State University Trustees to confer the degree of Master of Fine Arts (M.F.A.) on duly qualified students completing registered programs at the State University of New York at Albany and to establish a program in studio art leading to the degree of Master of Fine Arts (M.F.A.) at the State University of New York at Albany.

Approved by the Governor on 1/4/82.

SUNY Albany (10/23/81)

Authorized the State University Trustees to confer the degree of Master of Regional Planning (M.R.P.) on duly qualified students completing registered programs at the State University of New York at Albany and to establish a program in regional planning leading to the degree of Master of Regional Planning (M.R.P.) at the State University of New York Albany.

Approved by the Governor on 1/4/82.

SUNY Albany (11/20/81)

Authorized State University to establish a program in computer science leading to the degree of Doctor of Philosophy (Ph.D.) at the State University of New York at Albany.

Approved by the Governor on 1/4/82.

SUNY Binghamton (5/21/82)

Authorized State University to establish an upper division electrical engineering program and an upper division mechanical engineering program leading to the degree of Bachelor of Science (B.S.); and an electrical engineering program, a mechanical engineering program and an industrial engineering program leading to the degree of Master of Science (M.S.) at the State University of New York at Binghamton.

Approved by the Governor on 7/30/82.

Empire State College (2/26/82)

Authorized the State University Board of Trustees to confer the degree of Master of Arts (M.A.) on duly qualified candidates completing registered programs at Empire State College, and concurrently authorizing the establishment of programs in business and policy analysis, labor studies and policy analysis, and cultural studies and policy

analysis, each leading to the degree of Master of Arts (M.A.) at Empire State College, subject to the following conditions: (1) registration will be valid only for four years after the first students are admitted; (2) the programs will be reviewed by a panel of outside consultants after the third academic year of registration; continued registration will be contingent on the outcome of that review; (3) enrollment between the approval date and September 1, 1986, may not exceed 200 full-time equivalent (FTE) students; (4) the programs will be offered at two locations, one in the New York City Metropolitan area (the five boroughs or Nassau or Westchester county) and one in the Regents Mid-Hudson planning region; and (5) during the experimental period, the college will not seek to register any additional master's programs.

Approved by the Governor on 7/15/82.

SUC Fredonia (7/30/82)

Authorized State University to establish a program in communications/media leading to the degree of Bachelor of Science (B.S.) at the State University College at Fredonia.

Awaiting action by the Governor.

SUC New Paltz (11/20/80)

Authorized State University to establish a program in nursing leading to the degree of Bachelor of Science (B.S.) at the State University College at New Paltz.

Approved by the Governor on 2/24/81.

SUC Purchase (3/26/82)

Authorized State University to establish a program in language and culture leading to the degree of Bachelor of Arts (B.A.) at the State University College at Purchase.

Approved by the Governor on 5/20/82.

Agricultural and Technical College at Alfred (12/19/80)

Authorized State University to establish at Wellsville, Allegany County, a branch campus of the Agricultural and Technical College at Alfred and to offer at the branch campus programs in the major-mission area of mechanical and engineering technologies (5300).

Approved by the Governor on 7/15/81.

Erie Community College (9/24/82)

Authorized State University to establish a program in nursing leading to the degree of Associate in Applied Science (A.A.S.) at the City Campus of Erie Community College.

Awaiting action by the Governor.

Jamestown Community College (12/19/80)

Authorized State University to establish a branch campus of Jamestown Community College at Olean, Cattaraugus County, and to offer at the branch campus programs in the following major-mission areas: interdisciplinary studies (4900), data processing technologies (5100), mechanical and engineering technologies (5300), and public service related technologies (5500).

Approved by the Governor on 7/15/81.

Mohawk Valley Community College (12/19/80)

Authorized State University to establish a branch campus of Mohawk Valley Community College at Rome, Oneida County, and to offer at the branch campus programs in the following major-mission areas: interdisciplinary studies (4900), business and commerce technologies (5000), data processing technologies (5100), mechanical and engineering technologies (5300), and public service related technologies (5500).

Approved by the Governor on 7/15/81.

North Country Community College (12/19/80)

Authorized State University to establish a branch campus of North Country Community College at Elizabethtown, Essex County, and to offer at the branch campus programs in the following major-mission areas: interdisciplinary studies (4900), business and commerce technologies (5000), health services and paramedical technologies (5200), and public service related technologies (5500).

Approved by the Governor on 7/15/81.

North Country Community College (12/19/80)

Authorized State University to establish a branch campus of North Country Community College at Malone, Franklin County, and to offer at the branch campus programs in the following major-mission areas: interdisciplinary studies (4900), business and commerce technologies (5000), and health services and paramedical technologies (5200).

Approved by the Governor on 7/15/81.

North Country Community College (7/30/82)

Authorized State University to establish a branch campus of North Country Community College at Ticonderoga, Essex County, and to confer the degrees of Associate in Arts (A.A.), Associate in Science (A.S.), and Associate in Applied Science (A.A.S.) on duly qualified students completing registered programs at that branch campus and to offer at that branch campus programs in liberal arts and sciences - humanities and social sciences, and liberal arts and sciences - Adirondack studies, each leading to the degree of Associate in Arts (A.A.); and programs in individual studies leading to the degrees of Associate in Arts (A.A.), Associate in Science (A.S.), and Associate in Applied Science (A.A.S.).

Awaiting action by the Governor.

THE CITY UNIVERSITY OF NEW YORK

Graduate School and University Center (6/25/82)

Authorized City University to establish a program in earth and environmental science leading to the degree of Doctor of Philosophy (Ph.D.) at the Graduate School and University Center.

Approved by the Governor on 8/12/82.

Brooklyn College (6/25/82)

Authorized The City University Board of Trustees to confer the degree of Bachelor of Fine Arts (B.F.A.) on duly qualified students completing registered programs at Brooklyn College and to establish a program in art leading to the degree of Bachelor of Fine Arts (B.F.A.) at Brooklyn College.

Approved by the Governor on 9/9/82.

The College of Staten Island (6/26/81)

Authorized City University to establish a program in nursing leading to the degree of Bachelor of Science (B.S.) at The College of Staten Island.

Approved in part by the Governor, with conditions, and disapproved in part, on 8/21/81.

The College of Staten Island (6/25/82)

Authorized City University to establish a program in business leading to the degree of Bachelor of Science (B.S.) at The College of Staten Island.

Approved by the Governor on 8/12/82.

Herbert H. Lehman College (9/24/82)

Authorized the City University Board of Trustees to confer the degree of Master of Arts in Teaching (M.A.T.) on duly qualified students completing registered programs at Herbert H. Lehman College and to establish a program in music leading to the degree of Master of Arts in Teaching (M.A.T.) at Herbert H. Lehman College.

Awaiting action by the Governor.

Herbert H. Lehman College (9/24/82)

Authorized City University to establish a program in social work leading to the degree of Bachelor of Arts (B.A.) at Herbert H. Lehman College.

Awaiting action by the Governor.

Hunter College (12/19/80)

Authorized the City University Board of Trustees to confer the degree of Master of Fine Arts (M.F.A.) on duly qualified students completing registered programs at Hunter College and to establish a program in art leading to the degree of Master of Fine Arts (M.F.A.) at Hunter College.

Approved by the Governor on 2/23/81.

Queens College (11/20/81)

Authorized City University Board of Trustees to confer on duly qualified students completing registered programs at Queens College the degree of Bachelor of Fine Arts (B.F.A.) and to establish a program in art leading to the degree of Bachelor of Fine Arts (B.F.A.) at Queens College.

Approved by the Governor on 5/6/82.

Hostos Community College (6/26/81)

Authorized City University to acquire and improve the building it currently leases for the College at 475 Grand Concourse.

Approved by the Governor on 9/11/81.

Kingsborough Community College (10/22/82)

Authorized City University to establish a program in environmental health and science leading to the degree of Associate in Science (A.S.) at Kingsborough Community College.

Awaiting action by the Governor.

Appendix D

FORMAT OF STUDENT AID DATA REPORTS

Figure 5a
Sources of Student Financial Aid
Distributed to Undergraduate Students
Enrolled in New York State
By Sector 1980-81

(Amount and Number of Recipients)

Sources of Student Financial Aid	SUNY		CUNY		Independent		Proprietary		All Sectors	
	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number
A. GRANTS										
Institutional										
Private										
NYS										
TAP										
Regents Scholarship										
Opportunity Programs										
Other										
Pell										
SEOG										
Other Government										
Total										
B. LOANS										
NDSL										
GSL										
NYS										
Other										
Institutional										
Other										
Total										
C. STUDENT ASSISTANTSHIPS										
D. WAGES										
Institutional										
CWS										
Federal										
Institutional										
Total										
E. OTHER										
F. TOTAL STUDENT AID										

Sources of Student Financial Aid
As a Proportion of Total Student Aid
Distributed to Undergraduate Students
Enrolled in New York State
By Sector 1980-81

(Percent)

	SUNY	CUNY	Independent	Proprietary	All Sectors
Sources of Student Aid					
A. GRANTS					
Institutional					
Private					
NYS					
TAP					
Regents Scholarship					
Opportunity Programs					
Other					
Pell					
SEOG					
Other Government					
Total					
B. LOANS					
NDSL					
GSL					
NYS					
Other					
Institutional					
Other					
Total					
C. STUDENT ASSISTANTSHIPS					
D. WAGES					
Institutional					
CWS					
Federal					
Institutional					
Total					
E. OTHER					
F. TOTAL STUDENT AID	100.0	100.0	100.0	100.0	100.0

Figure 8e
Average Financial Aid Award by Program
Received by Undergraduate Student Recipients
Enrolled in New York State
By Sector 1980-81

	SUNY	CUNY	Independent	Proprietary	All Sectors
Sources of Student Aid					
A. GRANTS					
Institutional					
Private					
NYS					
TAP					
Regents Scholarship					
Opportunity Programs					
Other					
Pell					
SEOG					
Other Government					
Total					
B. LOANS					
NDSL					
GSL					
NYS					
Other					
Institutional					
Other					
Total					
C. STUDENT ASSISTANTSHIPS					
D. WAGES					
Institutional					
CWS					
[illegible]					
Institutional					
Total					
E. OTHER					

Figure 5d
Student Financial Aid
Recipients by Program as a Proportion of
All Undergraduate Students Enrolled in New York State
By Sector 1980-81

	SUNY	CUNY	Independent	Proprietary	All Sectors
Sources of Student Aid					
A. GRANTS					
Institutional					
Private					
NYS					
TAP					
Regents Scholarship					
Opportunity Programs					
Other					
Pell					
SEOG					
Other Government					
Total					
B. LOANS					
NDSL					
GSL					
NYS					
Other					
Institutional					
Other					
Total					
C. STUDENT ASSISTANTSHIPS					
D. WAGES					
Institutional					
CWS					
Federal					
Institutional					
Total					
E. OTHER					

Appendix E

Long Range Goals and Priorities for Occupational Education in New York State, with Activities Related to Postsecondary Education

1. Provide all individuals with an equal opportunity to participate in quality occupational education and practical arts programs with the necessary support services they need to remain in and receive maximum benefit from these programs.

   A. Provide quality occupational education programs and supportive services that will assist all individuals in meeting their immediate education and career goals and in obtaining skills and competencies necessary to compete in present and future labor markets.

      Activities Related to Postsecondary Education:

      A.1) The quality of occupational education in New York's secondary and postsecondary institutions will be improved through a joint effort by the institution and by the State Education Department's leadership, technical assistance and monitoring activities.

      A.5) Various Bureaus in the State Education Department in conjunction with teacher education institutions will examine: the content of teacher education programs; the certification requirements for various subject areas; teacher recruitment activities and the promotion of teaching as a profession.

      A.6) The quality of occupational education will be improved through the joint efforts of secondary and postsecondary institutions, and the State Education Department by improving the quality and increasing the availability of supervised work experience programs (i.e., cooperative work experience programs, capstone, etc.)

      A.8) The quality of instruction and research at New York's secondary and postsecondary institutions will be improved by increasing the availability of computers to support instructional processes.

   B. Provide programs for out-of-school youth and adults which assist them to overcome barriers to employment (or self-employment) such as the lack of job readiness, basic or job specific skills.

   C. Develop additional prevention programs to reduce the number of dropouts and unemployed youth, including alternative learning programs and programs which focus on the relevancy of occupational and practical arts education to work and life goals.

   D. Provide programs and supportive services for the handicapped in occupational education which are coordinated with other services for the handicapped, such as special education, pupil personnel services, and vocational rehabilitation.

E. Continue efforts to assure equity in occupational education programs and services through staff development, monitoring, technical assistance and other efforts to help eliminate stereotyping and discrimination based on race, color, national origin, sex, handicap, or quotas.

Activities Related to Postsecondary Education:

E.1) The State Education Department will develop or will assist local occupational education agencies to develop promotional, guidance, instructional, placement and other materials and programs that will provide equal access to educational and employment opportunities.

E.3) The State Education Department will: revise financial aid and support policies for the economically and educationally disadvantaged; support the Education Information Centers; and adopt pupil performance standards.

F. Provide prevocational experiences, career education and exploration, guidance and counseling, and improved career information systems so immediate educational and occupational choices will be informed and bias free.

G. Provide practical arts programs that: (1) develop those abilities, attitudes, and basic skills necessary for work, personal, family and community living, and (2) develop the quality to remain a vital part of our changing and complex society.

II. Support the economic development of New York by delivering quality occupational education programs and services at the secondary, postsecondary, and adult levels wiich reflect present and future labor market needs.

A. Ensure the overall quality of occupational education programs by developing relevant curricula; by providing well trained staff and instructors with up-to-date knowledge in their respective fields, and by providing up-to-date equipment and facilities.

B. Develop new and improve existing labor market and management information systems and evaluation and assessment processes so that occupational education programs will be improved and more responsive to labor market and student needs.

C. Establish occupational education as an integral component of economic development activities through cooperative efforts with the Governor's office and other State and local agencies to meet the quick start and specialized training needs of business and industry.

III. Ensure the efficiency of the occupational education delivery system while continuing to maintain program quality and to provide access to comprehensive occupational education programs for all individuals who can benefit from such programs.

A. Promote coordinated state and regional planning of occupational education, including programs and services that foster economic development.

Activities Related to Postsecondary Education:

A.2) Regional occupational education executive committees will continue to be a major means to promote coordinated delivery of occupational education and employment and training programs.

A.3) Regional occupational education executive committees will serve as a principal group in the contact, planning, negotiation and delivery of occupational programs to meet the specialized training needs of employers.

B. Continue to use and improve intra-agency planning and evaluation at BOCES, LEAs and postsecondary institutions which ensure occupational education programs are related to labor market needs and meet students' career goals.

Activities Related to Postsecondary Education:

B.3) The Division of Academic Program Review through its accreditation and program registration responsibilities will improve postsecondary occupational education programs.

B.4) The State Education Department will continue research efforts to identify, on a regional basis, the most efficient and cost-effective program structures for offering quality occupational education.

C. Improve programs articulation and the sharing of equipment, personnel, facilities, etc. among occupational education providers, and between employers and occupational education providers, to reduce duplication or gaps in occupational education programs and services.

Activities Related to Postsecondary Education:

C.2) The Office of Occupational and Continuing Education will review the Education Law and Commissioner's Regulations and will conduct other analyses and studies that examine how to develop a more responsive, flexible and cost effective occupational education system.

C.3) The State Education Department in conjunction with representatives of secondary and postsecondary sectors will develop an articulation plan that allows students to make a smooth transition from secondary to postsecondary occupational education programs.

C.4) The State Education Department in conjunction with adult education representatives will develop an articulation plan for the delivery of adult occupational education programs.

C.5) The State Education Department will establish formal means for linking the higher education master planning process with education and training programs in the private sector where an interest in such connections has been expressed.

D. Improve coordination of all programs and agencies involved in providing employment and training programs at both the State and local level to make effective use of resources.

E. Work with the Governor's office and other State agencies to develop a comprehensive statewide policy for employment and training in New York State.

Source: NYSED, Office for Occupational and Continuing Education, "New York State Program Plan for the Administration of Occupational Education..., Fiscal Years 1983-1987."